

**Schreiber, David**

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110138

**From:** Ramirez, Delia  
**Sent:** Tuesday, December 09, 2003 12:00 PM  
**To:** Schreiber, David  
**Subject:** case 09/843,250

Hi,

I would like to request the following interference searches: seq id 2, 26, 32, 33, 34, 35, 36 in the protein databases.

Thank you,

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Delia M. Ramirez, Ph.D.  
Patent Examiner  
Recombinant Enzymes-Art Unit 1652  
USPTO  
1911 S. Clark Street, Crystal Mall 1, 10D06, Mail room 10D01  
Arlington, VA 22202  
(703) 306-0288  
delia.ramirez@uspto.gov

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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)

3771.269 Million cell updates/sec

Title: US-09-843-250-33

Perfect score: 2408

Sequence: 1 MNYNKILVSEGLSQKHLI.....AEFHASSTWELTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database : Published Applications AA:\*

1: /cgm2\_6/ptodata/1/pubpa/US07\_PUBCOMB.pep.\*  
2: /cgm2\_6/ptodata/1/pubpa/PCT\_NEW\_PUB.pep.\*  
3: /cgm2\_6/ptodata/1/pubpa/US06\_NEW\_PUB.pep.\*  
4: /cgm2\_6/ptodata/1/pubpa/US06\_PUBCOMB.pep.\*  
5: /cgm2\_6/ptodata/1/pubpa/US07\_NEW\_PUB.pep.\*  
6: /cgm2\_6/ptodata/1/pubpa/PCTUS\_PUBCOMB.pep.\*  
7: /cgm2\_6/ptodata/1/pubpa/US08\_NEW\_PUB.pep.\*  
8: /cgm2\_6/ptodata/1/pubpa/US08\_PUBCOMB.pep.\*  
9: /cgm2\_6/ptodata/1/pubpa/US09\_PUBCOMB.pep.\*  
10: /cgm2\_6/ptodata/1/pubpa/US09\_PUBCOMB.pep.\*  
11: /cgm2\_6/ptodata/1/pubpa/US09C\_PUBCOMB.pep.\*  
12: /cgm2\_6/ptodata/1/pubpa/US09C\_NEW\_PUB.pep.\*  
13: /cgm2\_6/ptodata/1/pubpa/US10\_PUBCOMB.pep.\*  
14: /cgm2\_6/ptodata/1/pubpa/US10\_PUBCOMB.pep.\*  
15: /cgm2\_6/ptodata/1/pubpa/US10C\_PUBCOMB.pep.\*  
16: /cgm2\_6/ptodata/1/pubpa/US10C\_NEW\_PUB.pep.\*  
17: /cgm2\_6/ptodata/1/pubpa/US60\_NEW\_PUB.pep.\*  
18: /cgm2\_6/ptodata/1/pubpa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2408	100.0	449	11	US-09-843-250-33
2	2404	99.8	449	11	Sequence 33, Appl
3	2404	99.8	449	11	Sequence 2, Appl
4	2404	99.8	449	11	Sequence 14, Appl
5	2404	99.8	449	11	Sequence 15, Appl
6	2404	99.8	449	11	Sequence 32, Appl
7	2403	99.8	449	11	Sequence 34, Appl
8	2403	99.8	449	11	Sequence 35, Appl
9	2402	99.8	449	11	Sequence 36, Appl
10	2402	99.8	449	11	Sequence 26, Appl
11	2401	99.7	449	11	Sequence 59, Appl
12	2399	99.6	449	11	Sequence 58, Appl
13	2394	99.4	449	11	Sequence 16, Appl
14	2346	97.4	449	11	Sequence 17, Appl
15	2318	96.3	449	11	Sequence 18, Appl
					Sequence 19, Appl

16	2292	95.2	449	11	US-09-843-250-20	Sequence 20, Appl
17	2219	92.2	449	11	US-09-843-250-21	Sequence 21, Appl
18	2189	90.9	447	11	US-09-843-250-22	Sequence 22, Appl
19	2052	85.2	447	11	US-09-843-250-23	Sequence 23, Appl
20	1968.5	81.7	451	11	US-09-843-250-24	Sequence 24, Appl
21	735	30.5	453	9	US-09-815-242-10253	Sequence 10253, A
22	375.5	15.6	385	9	US-09-815-242-11692	Sequence 11692, A
23	375	15.6	490	10	US-09-738-626-6140	Sequence 6140, Ap
24	336.5	14.0	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
38	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
44	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl
45	105.5	4.4	951	10	US-09-924-097-15	Sequence 15, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-843-250-33  
; Sequence 33, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Farales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875, 006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 33  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.  
US-09-843-250-33

Query Match 100.0%; Score 2408; DB 11; Length 449;

Best Local Similarity 100.0%; Pred. No. 1.5e-225;

Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MNYNKILVSEGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIIPAGDVYVAKMG	60
Db	1	MNYNKILVSEGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIIPAGDVYVAKMG	60
Qy	61	IDEVIVSRQNDGSRFAFLNVCVRHGKTLIVSEAGNAKGFVCSYHGWGFGSNGELQSVFFE	120
Db	61	IDEVIVSRQNDGSRFAFLNVCVRHGKTLIVSEAGNAKGFVCSYHGWGFGSNGELQSVFFE	120

```
QY 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGISETSYRGFYRAY 420
Db 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGISETSYRGFYRAY 420
QY 421 QAHVSSNNAEFAHSTWHTLTKTDR 449
Db 421 QAHVSSNNAEFAHSTWHTLTKTDR 449
```

## RESULT 2

```
US-09-843-250-2
; Sequence 2, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875,006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1
US-09-843-250-2
```

```
Query Match 99.8%; Score 2404; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 3.7e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 1 MNNKILVSESGLSQKHLIHGDEELFQHELKTI FARNWLFTHDSLIPAPGDYVTAKMG 60
Db 1 MNNKILVSESGLSQKHLIHGDEELFQHELKTI FARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEIVSRQNDGSIRAFINVCRRHGTLSVSEAGNAKGFVCSYHGWGSGNGELQSVFPE 120
Db 61 IDEIVSRQNDGSIRAFINVCRRHGTLSVSEAGNAKGFVCSYHGWGSGNGELQSVFPE 120
QY 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
```

```
QY 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGISETSYRGFYRAY 420
Db 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGISETSYRGFYRAY 420
QY 421 QAHVSSNNAEFAHSTWHTLTKTDR 449
Db 421 QAHVSSNNAEFAHSTWHTLTKTDR 449
```

## RESULT 3

```
US-09-843-250-14
; Sequence 14, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875,006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.
US-09-843-250-14
```

```
Query Match 99.8%; Score 2404; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 3.7e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 1 MNNKILVSESGLSQKHLIHGDEELFQHELKTI FARNWLFTHDSLIPAPGDYVTAKMG 60
Db 1 MNNKILVSESGLSQKHLIHGDEELFQHELKTI FARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEIVSRQNDGSIRAFINVCRRHGTLSVSEAGNAKGFVCSYHGWGSGNGELQSVFPE 120
Db 61 IDEIVSRQNDGSIRAFINVCRRHGTLSVSEAGNAKGFVCSYHGWGSGNGELQSVFPE 120
QY 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESPHGFIYCGFQOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPPGKVVIKANWKAPAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTAGPAGFWES 360
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGISETSYRGFYRAY 420
```

Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVGVKSAIGTSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHSASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHSASTWHTLTKTTDR 449

## RESULT 4

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.  
US-09-843-250-15

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.7e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MYNNKILVSESGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAPGDYVTAKMG 60  
Db 1 MYNNKILVSESGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQDGSIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPWFKHSGL 180  
Db 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPWFKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNALPPEGAGL 240  
Db 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNALPPEGAGL 240  
QY 241 QMTSKYSGMGVLWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPIDANTTEWTTVAIVEKOMPEDLKRRLADSVQRTAGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPIDANTTEWTTVAIVEKOMPEDLKRRLADSVQRTAGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVGVKSAIGTSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVGVKSAIGTSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHSASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHSASTWHTLTKTTDR 449

## RESULT 5

US-09-843-250-34  
; Sequence 34, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the

; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; PRIOR FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: Fast-Seq for Windows Version 4.0  
 ; SEQ ID NO 34  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.  
 US-09-843-250-34

Query Match	99.8%;	Score 2404;	DB 11;	Length 449;
Best Local Similarity	99.8%;	Pred. No. 3.7e-225;		
Matches 448;	Conservative 0;	Mismatches 1;	Indels 0;	Gaps 0;

  

QY	1	MYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAGDYVTAKG	60
DB	1	MYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAGDYVTAKG	60
QY	61	IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE	120
DB	61	IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE	120
QY	121	KDIYGESLNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL	180
DB	121	KDIYGESLNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL	180
QY	181	ELVGPFGKVIKANWKAPAEFVGDVHVGWTHASSLSGESIFSSLAGNAALPPGAGL	240
DB	181	ELVGPFGKVIKANWKAPAEFVGDVHVGWTHASSLSGESIFSSLAGNAALPPGAGL	240
QY	241	QMTSKYSGMGVLDGYSVGHSAADLVPFLMAFGGAKQERLNKEIGDVRIYRSHLNCV	300
DB	241	QMTSKYSGMGVLDGYSVGHSAADLVPFLMAFGGAKQERLNKEIGDVRIYRSHLNCV	300
QY	301	FPNNSMLTCSGVFKVNPIDANTTEWYTAIVEKMPEDLKRLADSVQRTAGPAGFWES	360
DB	301	FPNNSMLTCSGVFKVNPIDANTTEWYTAIVEKMPEDLKRLADSVQRTAGPAGFWES	360
QY	361	DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDVGDVYGVGKSAIGSTSYRGFYRAY	420
DB	361	DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDVGDVYGVGKSAIGSTSYRGFYRAY	420
QY	421	QAHVSSNNAEPFHASSTWHTLTKTTDR	449
DB	421	QAHVSSNNAEPFHASSTWHTLTKTTDR	449

## RESULT 7

US-09-843-250-35  
 ; Sequence 35, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Paralees, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; PRIOR FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: Fast-Seq for Windows Version 4.0

; SEQ ID NO 35  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.  
 US-09-843-250-35

Query Match	99.8%;	Score 2403;	DB 11;	Length 449;
Best Local Similarity	99.8%;	Pred. No. 4.6e-225;		
Matches 448;	Conservative 0;	Mismatches 1;	Indels 0;	Gaps 0;

  

QY	1	MYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAGDYVTAKG	60
DB	1	MYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAGDYVTAKG	60
QY	61	IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE	120
DB	61	IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE	120
QY	121	KDIYGESLNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL	180
DB	121	KDIYGESLNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL	180
QY	181	ELVGPFGKVIKANWKAPAEFVGDVHVGWTHASSLSGESIFSSLAGNAALPPGAGL	240
DB	181	ELVGPFGKVIKANWKAPAEFVGDVHVGWTHASSLSGESIFSSLAGNAALPPGAGL	240
QY	241	QMTSKYSGMGVLDGYSVGHSAADLVPFLMAFGGAKQERLNKEIGDVRIYRSHLNCV	300
DB	241	QMTSKYSGMGVLDGYSVGHSAADLVPFLMAFGGAKQERLNKEIGDVRIYRSHLNCV	300
QY	301	FPNNSMLTCSGVFKVNPIDANTTEWYTAIVEKMPEDLKRLADSVQRTAGPAGFWES	360
DB	301	FPNNSMLTCSGVFKVNPIDANTTEWYTAIVEKMPEDLKRLADSVQRTAGPAGFWES	360
QY	361	DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDVGDVYGVGKSAIGSTSYRGFYRAY	420
DB	361	DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDVGDVYGVGKSAIGSTSYRGFYRAY	420
QY	421	QAHVSSNNAEPFHASSTWHTLTKTTDR	449
DB	421	QAHVSSNNAEPFHASSTWHTLTKTTDR	449

## RESULT 8

US-09-843-250-36  
 ; Sequence 36, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Paralees, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; PRIOR FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: Fast-Seq for Windows Version 4.0  
 ; SEQ ID NO 36  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.  
 US-09-843-250-36

Query Match

99.8%; Score 2403; DB 11; Length 449;

Best Local Similarity 99.8%; Pred. No. 4.6e-225; Mismatches 1; Indels 0; Gaps 0;  
Matches 448; Conservative 0;

QY 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60  
DB 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120

QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180

QY 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGGAQKQERLNKEIGDVRARIYRSHLACTV 300  
DB 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGGAQKQERLNKEIGDVRARIYRSHLACTV 300

QY 301 FNNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FNNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360

QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVYGDVYGVVCKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVYGDVYGVVCKSAIGETSYRGFYRAY 420

QY 421 QARVSSSNWAEFEHASSTWHTLTKTTR 449  
DB 421 QARVSSSNWAEFEHASSTWHTLTKTTR 449

## RESULT 9

US-09-843-250-26  
; Sequence 26, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paraless, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 26  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Pseudomonas sp.  
US-09-843-250-26

Query Match 99.8%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 5.8e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60  
DB 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120

QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180

QY 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGGAQKQERLNKEIGDVRARIYRSHLACTV 300  
DB 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGGAQKQERLNKEIGDVRARIYRSHLACTV 300

QY 301 FNNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FNNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360

QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVYGDVYGVVCKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVYGDVYGVVCKSAIGETSYRGFYRAY 420

QY 421 QARVSSSNWAEFEHASSTWHTLTKTTR 449  
DB 421 QARVSSSNWAEFEHASSTWHTLTKTTR 449

## RESULT 10

US-09-843-250-59  
; Sequence 59, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paraless, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 59  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.  
US-09-843-250-59

Query Match 99.8%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 5.8e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60  
DB 1 MYNNKILVSESGLSQKHLIHGDELFQHELTIPARNWLFTHDSLIAPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVNCRHGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120

QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMFKHSGGL 180

QY 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVIKANKWKAPEAFNVGDVYHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGGAQKQERLNKEIGDVRARIYRSHLACTV 300

Db 241 QMTSKYSGMGLMDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 11  
US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralees, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.  
US-09-843-250-58

Query Match 99.7%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 7,28-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSSSGLSQKHLIHGDEBELFOHELKTIIPARNMLFLTHDSLIPAGDYVTAKMG 60  
Db 1 MNYNNKILVSSSGLSQKHLIHGDEBELFOHELKTIIPARNMLFLTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQDGSIRAFNLVCRHKGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFNLVCRHKGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPEAFNVGDVAVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNVGDVAVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
QY 241 QMTSKYSGMGLMDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLMDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420

Db 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 12  
US-09-843-250-16  
; Sequence 16, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralees, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 16  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.6%; Score 2399; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 1,1e-224;  
Matches 447; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSSSGLSQKHLIHGDEBELFOHELKTIIPARNMLFLTHDSLIPAGDYVTAKMG 60  
Db 1 MNYNNKILVSSSGLSQKHLIHGDEBELFOHELKTIIPARNMLFLTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQDGSIRAFNLVCRHKGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFNLVCRHKGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPEAFNVGDVAVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNVGDVAVHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
QY 241 QMTSKYSGMGLMDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLMDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTAGPAGFWES 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVDYGDVAVPGVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 13  
US-09-843-250-17

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; Sequence 17, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; TYPE: PRT
; LENGTH: 449
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:6.
US-09-843-250-17

Query Match          99.4%; Score 2394; DB 11; Length 449;
Best Local Similarity 99.3%; Pred. No. 3.5e-224; Indels 0; Gaps 0;
Matches 446; Conservative 1; Mismatches 2;

QY 1 MNYNNKILVSEGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAGDVYVTAQMG 60
Db 1 MNYNNKILVSEGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAGDVYVTAQMG 60
QY 61 IDEVIVSRQNDGSIIRAFNLVNCRHKGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVPF 120
Db 61 IDEVIVSRQNDGSIIRAFNLVNCRHKGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVPF 120
QY 121 KOLYGESLNKKICGLKEVARVESFHGFIYGCDFQDQAPPLMDYLDGDAWYLEPMPKHSGL 180
Db 121 KOLYGESLNKKICGLKEVARVESFHGFIYGCDFQDQAPPLMDYLDGDAWYLEPMPKHSGL 180
QY 181 ELVGPPEKVVIIKANWKAPAEFVGDYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPPEKVVIIKANWKAPAEFVGDYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVVARIYRSHLNCV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVVARIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYVAIVEKDMPEDLKRLADSVQRTAGPAGFWS 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYVAIVEKDMPEDLKRLADSVQRTAGPAGFWS 360
QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGDVYGVVGSAGTSETSYRGFYRAY 420
Db 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGDVYGVVGSAGTSETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

RESULT 14
US-09-843-250-18
; Sequence 18, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 18
; TYPE: PRT
; LENGTH: 449
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.
US-09-843-250-18

Query Match          97.4%; Score 2346; DB 11; Length 449;
Best Local Similarity 96.7%; Pred. No. 1.6e-219; Indels 0; Gaps 0;
Matches 434; Conservative 10; Mismatches 5;

QY 1 MNYNNKILVSEGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAGDVYVTAQMG 60
Db 1 MNYNNKILVSEGLSQKHLIHGDELFQHELKTIIPARNWLFTHDSLIPAGDVYVTAQMG 60
QY 61 IDEVIVSRQNDGSIIRAFNLVNCRHKGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVPF 120
Db 61 IDEVIVSRQNDGSIIRAFNLVNCRHKGKTLVSVVAGNAKGFVCSYHGWGFGSGNGELQSVPF 120
QY 121 KOLYGESLNKKICGLKEVARVESFHGFIYGCDFQDQAPPLMDYLDGDAWYLEPMPKHSGL 180
Db 121 KOLYGESLNKKICGLKEVARVESFHGFIYGCDFQDQAPPLMDYLDGDAWYLEPMPKHSGL 180
QY 181 ELVGPPEKVVIIKANWKAPAEFVGDYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPPEKVVIIKANWKAPAEFVGDYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVVARIYRSHLNCV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVVARIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYVAIVEKDMPEDLKRLADSVQRTAGPAGFWS 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYVAIVEKDMPEDLKRLADSVQRTAGPAGFWS 360
QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGDVYGVVGSAGTSETSYRGFYRAY 420
Db 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGDVYGVVGSAGTSETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

RESULT 15
US-09-843-250-19
; Sequence 19, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19

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; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: Xaa = any amino acid.
US-09-843-250-19

Query Match      96.3%; Score 2318; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 8.7e-217;
Matches 429; Conservative 12; Mismatches 8; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGISQKHLIHGDELFQHELFKTEFARNWLFTHDSLIPAPGDYVTAKMG 60
Db 1 MNYNKKILVSESGISQKHLIHGDELFQHELFKTEFARNWLFTHDSLIPAPGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGKTLNVSVEAGNAGFVCSYHGMGFGSNGELQSVPE 120
Db 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGKTLNVSVEAGNAGFVCSYHGMGFGSNGELQSVPE 120

QY 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180
Db 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180

QY 181 ELVGPFGKVVITKANWKAPAENFVGDAVHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPFGKVVITKANWKAPAENFVGDAVHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240

QY 241 QMTSKYSGMGVLDYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
Db 241 QMTSKYSGMGVLDYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCGKVKVWNPIDANTTEVWTYIAVEKMPEDLKRRLADSVQRTAGPAGFWES 360
Db 301 FPNNSMLTCGKVKVWNPIDANTTEVWTYIAVEKMPEDLKRRLADSVQRTAGPAGFWES 360

QY 361 DDNDNMETASONGKYYQSRSDLSNLGFGEDVYGDVYFGVVGKSAIGETSYRGFYRAY 420
Db 361 DDNDNMETASONGKYYQSRSDLSNLGFGEDVYGDVYFGVVGKSAIGETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

```

Search completed: December 9, 2003, 16:09:33  
Job time : 23.1429 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-34

Perfect score: 2409

Sequence: 1 MNYNNKILVSSGLSQKHLI.....AEPEHASTWHTLTKTDDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listed first 45 summaries

Database :

Issued Patents AA:\*  
1: /cgn2\_6/prodata/1/1aa/5A COMB.pap:\*  
2: /cgn2\_6/prodata/1/1aa/5B COMB.pap:\*  
3: /cgn2\_6/prodata/1/1aa/5A COMB.pap:\*  
4: /cgn2\_6/prodata/1/1aa/5B COMB.pap:\*  
5: /cgn2\_6/prodata/1/1aa/5A COMB.pap:\*  
6: /cgn2\_6/prodata/1/1aa/5B COMB.pap:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	407.5	16.9	463	4	US-09-252-991A-31367
2	407.5	16.9	496	4	US-09-328-352-6452
3	388	16.1	445	4	US-09-328-352-7248
4	382.5	15.9	466	4	US-09-252-991A-31385
5	360	14.9	471	4	US-09-328-352-7581
6	344.5	14.3	425	4	US-09-252-991A-25088
7	291	12.1	449	4	US-09-252-991A-17164
8	278.5	11.6	375	4	US-09-328-352-4700
9	237.5	9.9	529	4	US-09-252-991A-19627
10	224	9.3	446	4	US-09-004-3938-4
11	223	9.3	439	4	US-09-004-3938-2
12	185	7.7	35	3	US-08-810-009-19
13	174	7.2	35	3	US-08-810-009-20
14	168	7.0	35	3	US-08-810-009-21
15	143.5	6.0	629	4	US-09-252-991A-27100
16	128	5.3	332	4	US-09-328-352-6765
17	118.5	4.9	354	4	US-08-976-0638-4
18	113.5	4.7	379	3	US-09-028-934-36
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-14
21	108	4.5	35	3	US-08-810-009-13
22	108	4.5	35	3	US-08-810-009-15
23	108	4.5	622	4	US-09-311-6268-4
24	106.5	4.4	432	3	US-08-809-326A-16
25	106.5	4.4	432	4	US-09-689-913A-16
26	106.5	4.4	432	4	US-09-689-913A-16
27	106.5	4.4	432	4	US-09-689-916A-16

28	106.5	4.4	649	3	US-08-809-326A-15	Sequence 15, Appl
29	106.5	4.4	649	4	US-09-689-914A-15	Sequence 15, Appl
30	106.5	4.4	649	4	US-09-689-913A-15	Sequence 15, Appl
31	106.5	4.4	649	4	US-09-689-916A-15	Sequence 15, Appl
32	106	4.4	35	3	US-08-810-009-9	Sequence 9, Appl
33	106	4.4	364	4	US-09-328-352-4956	Sequence 456, Ap
34	104	4.3	35	3	US-08-810-009-18	Sequence 18, Appl
35	103	4.3	35	3	US-08-810-009-11	Sequence 11, Appl
36	102	4.2	35	3	US-08-810-009-8	Sequence 8, Appl
37	102	4.2	35	3	US-08-810-009-10	Sequence 10, Appl
38	101	4.2	17	3	US-08-810-009-44	Sequence 44, Appl
39	101	4.2	17	3	US-08-810-009-45	Sequence 45, Appl
40	101	4.2	1132	4	US-09-198-452A-466	Sequence 466, App
41	100.5	4.2	363	4	US-09-328-352-5961	Sequence 5961, Ap
42	100	4.2	35	3	US-08-810-009-17	Sequence 17, Appl
43	99.5	4.1	256	4	US-09-325-932A-57	Sequence 57, Appl
44	97.5	4.0	395	4	US-09-252-991A-28371	Sequence 28371, A
45	96	4.0	563	4	US-09-134-001C-4800	Sequence 4800, Ap

## ALIGNMENTS

### RESULT 1

US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; FILE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,768  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31367  
; LENGTH: 463  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31367

Query Match	16.9%	Score	407.5	DB 4	Length	463			
Best Local Similarity	29.0%	Pred. No.	1.2e-30						
Matches	110	Conservative	69	Mismatches	149	Indels	51	Gaps	17
QY	23	DEELFOHELTIFARNWFLTHDSLIIPAGDYVYAKMGIDIVIVSRONDGSIKRAFLNVR	82						
DB	38	DPRLFELENKHIFEGNWWYLAHESQVAGVNDYLTQIGRQSVIYARNRDGQLNAFINACS	97						
QY	83	HRGKTIVSVEAGNAGFCVSYHGCGFSGNGELQSV--PFEXDLYGESLNKKCLG----	137						
DB	98	HRGAWLCRHSKGNRSSYTCPPHGWTFNNSGKLKVKVDPAEAG-YPOGFN--CESHDLTR	154						
QY	138	VARVSPFHGFIYGCDFQAEAPPLMDYLGDAAWYLPMPKHS--GGLEYVGPQPKVYKANWK	196						
DB	155	VARFESYRGFLGSLNPDVRLAEHLGESAKIIDWVDQSPGELVLRGSSSYVEYGNWK	214						
QY	197	APAEFVGDYVING--WTHASS-----LRSGESIFSLAGNALPPEAGLQ	241						
DB	215	LTAEN--GADGYHVSVVHNYAATOSQROORDAADPLRT-----MSAAGWAR---QGGGFY	265						
QY	242	MTSKYSGMGVLWDGVSQVHSAADLVE--LMAFGGAKOERLNKEIGDVAR--IYFASHLNC	299						
DB	266	---SFEHGHMLWSRWAN-----PEDPPAF--ERRAELARDFGEAADMWIENSRNL	313						
QY	300	VFPNNSML--TCSGVFKVWNPIDANTTEVWTVVAIVEKOMPEDLKRLADSVORTTGPAGW	358						
DB	314	LVPNVYLMDFQSSQIRIARPLSVDRTEITTYICIAPKGSABARARRINQYEDFFNVSGMA	373						

QY 359 ESDNDNNMETASQNGKKYQ 377  
 Db 374 TPDDLEFRSCQOQ---YQ 389

## RESULT 2

US-09-328-352-6452  
 ; Sequence 6452, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 6452  
 ; LENGTH: 496  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-6452

Query Match 16.9%; Score 407.5; DB 4; Length 496;  
 Best Local Similarity 31.3%; Pred. No. 1.4e-30;  
 Matches 105; Conservative 59; Mismatches 146; Indels 25; Gaps 13;

QY 23 DBELFQHELKTI FARNWMLFLTHDSLIPAPGDYVTAQMGIDIVIVSRQNDGSI RALFN 82  
 Db 73 DBALFDLEMKYIFEGNWWYLAHESQIPNNNDYTYTGROPIIIRNRNGELNARMINACS 132  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPEKDL-YGESLNKK-CLGLKEVAR 140  
 Db 133 HRGAQLCRYKGNKATYTCPEHGWTFNNSGKLLKVKDFTDAGYSDCFNQGSHDLKKVAR 192  
 QY 141 VESFHGFIYCGDQBPAPLMDYLGDAAWYLEPMPFKHS-GGLELVGPPGKVIKANKKAPA 199  
 Db 193 PESYKGFGLGSLNPDVPSLEBFLGETTKIIDIMVDQSEHGLEVLGRSGSTTYEGNWKLT 252  
 QY 200 ENFVGDAYHVG---NTHASSLSRSGSIFSSLAGNAALPPEGA-GLQMTSKY-G-SMGVL 253  
 Db 253 EN-GADGTHVSVAHVNNYIARTQHRKE--TQADNIRAMSGSWGKQGGSYGFENGHMLL 309  
 QY 254 WDYSYGVASADIVPELMAFGGAQERLNKEIGDVRAR--IYRSHLNTCTVFPNNSMLTCSG 311  
 Db 310 WTQWNPEDRPNP-----KADSEYKTEKGEAMSKWMIERS-NLCLYENVYVLMQFG 360  
 QY 312 -VFKVNNPIDANTTEWTVAIVEK-DMPEDLKRLL 344  
 Db 361 SQIRVLRLSVNRTEVTYTCIAPKEAPEARRI 395

## RESULT 3

US-09-328-352-7248  
 ; Sequence 7248, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 7248  
 ; LENGTH: 445  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7248

Query Match 16.1%; Score 388; DB 4; Length 445;  
 Best Local Similarity 28.1%; Pred. No. 8.7e-29;  
 Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 THGDELFQHELKTI FARNWMLFLTHDSLIPAPGDYVTAQMGIDIVIVSRQNDGSI RALFN 79  
 Db 47 LYKDERIFDEMEKIFYSTVWVAHASEIPGSGSYKTNIGKQPVVVRDRKKKVVLLN 106  
 QY 80 VCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPEKDLYESLNKKCLGLKEVA 139  
 Db 107 RCHRAATVCEHKKGTNSFVCPYHGWSYALDGSRLGVP-SPESYGDCLDKSLPLVSL- 164  
 QY 140 RVESFHGFIYCGDQBPAPLMDYLGDAAWYLEPMPFKHSGG--LELVGP-----PGKVIK 192  
 Db 165 RVEYNGMIPASFKEIQLEEFGLGPAKWDILFMKQAGYPIKVLGEHFRFPG----- 219  
 QY 193 ANWKAPAEFVGDAYHVGWTHASSLSR-----GESIFSSLAGNAALPPEGAGLQMTSKYGS 248  
 Db 220 -NWKIQLEN-TTDAYHFFPLVHKSFSLSVDEKTELEFN-----FEN 257  
 QY 249 GWGLMDGYSGVHSADLVPELMAFGGAQER-LNKEIGDVR-----ARIYR- 293  
 Db 258 QPGFVEDLGNCHSVVMWIPELVDLEEDLMERPQOERPEDLAQALRDGHEELEVRIIRA 317  
 QY 294 ---SHLNTCTVFPNNSMLTCS-GVFKVNNPIDANTTEWTVAIVEK-----MPEDLKRLL 345  
 Db 318 VGGSGFNLMLEFN---IACSMAPFRVLQPIASVATEI-HESVITMDGGPQAIANQYLRH 373  
 QY 346 DSVQRTTGPAGFMESDDNNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVG- 404  
 Db 374 EHFQ---GPFQGTGTPDSEAWERV-QHGAN-AGNDLWIMLNRL-----PGEVKT 418  
 QY 405 ----KSAI-GETSYRGFYRAYQ 421  
 Db 419 EDGLKSDVSAETGMRAAYQOWK 440

## RESULT 4

US-09-252-991A-31385  
 ; Sequence 31385, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 31385  
 ; LENGTH: 466  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-31385

Query Match 15.9%; Score 382.5; DB 4; Length 466;  
 Best Local Similarity 27.1%; Pred. No. 3.2e-28;  
 Matches 120; Conservative 77; Mismatches 182; Indels 63; Gaps 18;

QY 23 DBELFQHELKTI FARNWMLFLTHDSLIPAPGDYVTAQMGIDIVIVSRQNDGSI RALFN 82  
 Db 39 EPLEFDLEMLIFENWYIACHESLARPHDFVTLRAGROPLIVIRGNOQLHALVDACQ 98  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSV--PFEKDLYESLNKKCLGLKEVAR 140  
 Db 99 HRGATLVREVGKNGSTFTCPFHAWCYKNDGRLVKVAPGE---YPEGFDKATRLKAK-AR 154  
 QY 141 VESFHGFIYCGDQEA-PPLMDYLGDAAWYLEPMPFKH--SGGLELVGPPGKVIKANKKA 197  
 Db 155 IQSYRGFVFSLDVAGBDDLVDLGDARVFLDMLVAQSPSGBLEVLFGTSTTYEGNWK 214  
 QY 198 PAENFVGDAYHVGWTHASSLSRSGSIFSSLAGNAALPPEGAGLQMT---SKYSGMGVL- 253

Db 215 QNENGL-DGHHVSTVTHNYV-----ATVQHRQQVEAERGVAATLDYSKLGDAADT 266  
 QY 254 --MDGYSQVHS-----ADLPPELMAGGAKQERLNKEIGDVRIYRSHL 296  
 Db 267 DGMFSPANGHSVLFSEMPENPAVRPGYASVMPRLVA-----EYGOARAEWMMHRL 315  
 QY 297 -NCTVFPNNSML-TCSGVFKVWNPIDANTTEWYTAI-VSKMPEDLKRRLADSVQRTTG 353  
 Db 316 RNALNPLSLFVIDQISQLAIRVPLAWNRTEIVSQCTGVKGSADADRENRII-QFEDFFN 374  
 QY 354 PAGFWSDDNMMETASQNGKYSQSRDLSNLGFGEDVYGVDAVPGVVKSAI--GE 410  
 Db 375 VSGMGTDDLVFREAQGFQARLRMSDI--SRGKGNLEGATPNSQALGIAPLTGTE 432  
 QY 411 TSYRGFTYAYQAHVSSNNWAF 432  
 Db 433 ITHREGLYVQAH-----WRRP 449

## RESULT 5

US-09-328-352-7581  
 ; Sequence 7581, Application US/09328352  
 ; Patent No. 6562958

## GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 7581

LENGTH: 471  
 TYPE: PRT

ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7581

Query Match 14.9%; Score 360; DB 4; Length 471;  
 Best Local Similarity 25.8%; Pred. No. 4.6e-26;  
 Matches 114; Conservative 69; Mismatches 161; Indels 78; Gaps 16;  
 QY 23 DEELFOHELKTIPARNWLFTHDSLIPAGDYVYVAKMGIDIVIVSRQNDGSIAPLNVCR 82  
 Db 35 BPELFDLEMYTEIFKVMYIACHSEIEFNHDFLTVOIGRQPIIVSRDGGELHAWNACE 94  
 QY 83 HRGKTLVSVAGNAKGFVCSYHGMFGSGNGELQSVPEKDLGSLNKKICLGLKEVARVE 142  
 Db 95 HRGATLTVAKGNQSTTCPHAWCYKSDGRLVKVKAPE--YCEDFDKSRGLKQ--GRIA 152  
 QY 143 SFHGFIYGCFOEA--PPLMDYLGAAWLYLPEPMFKHS--GGLELVGPPGKVVIVKANWKAFA 199  
 Db 153 SYRGFVFSLDTQATDSLEDPLGDAKLFLLMWNOSPTGLEVLQKSSVTPAGNKLQW 212  
 QY 200 ENFVGDAVHGWTH---ASSLRSGESIFSSLAGNAALPPGAGLQMT--SKYSGMGVLM 254  
 Db 213 ENGL-DGHHVSTVTHNYVSTVQHRQQVNAS-----KGAEPLDLDYSKLGADSETD 262  
 QY 255 DGYSQVHSADLV-----PELMAGGAKQERLNKEIGDVRIYRSHL-NCTVFPNNSM 306  
 Db 263 DGMFSGKNGHSVLFSDMNPVTRPGYSTVMYVYKGYEKYAEWAMHRLNMLYSLFP 322  
 QY 307 L-TCSGVFKVWNPIDANTTEWYTAI-VSKMPEDLKRRLADSVQRTTGPGFWSDDNDN 365  
 Db 323 MDQISQLRIVRPAWNKTIV-----ISQCIQVKG--ES-----354  
 QY 366 METASQNGKYSQSRDLSNLGFGEDVYGVDAVPGVVKSAIGSETSYRGFYRAYQAHVS 425  
 Db 355 --TEARRNRIQFEDFFNVSGLGTFDDLI-----VEFREQQGFGQARL-- 394  
 QY 426 SSNAEFHAGSTWHTLTKTT 447  
 Db 395 -ERNSDISRGCSWEYGATKNS 415

## RESULT 6

US-09-252-991A-25088  
 ; Sequence 25088, Application US/09252991A  
 ; Patent No. 6551795

## GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 25088

LENGTH: 425  
 TYPE: PRT

ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-25088

Query Match 14.3%; Score 344.5; DB 4; Length 425;  
 Best Local Similarity 27.4%; Pred. No. 1.2e-24;  
 Matches 114; Conservative 71; Mismatches 178; Indels 53; Gaps 15;  
 QY 25 ELFOHELKTIPARNWLFTHDSLIPAGDYVYVAKMGIDIVIVSRQNDGSIAPLNVCRHR 84  
 Db 25 ELHRELHEIFDDSWLYAAHLSELREFFGDFITRDVGGRNLIQRRADGEPVAVYLNACAR 84  
 QY 85 GKTIVSVAGNAKGFVCSYHGMFGSGNGELQSVPEKDLGSLNKKICLGLKEVARVES- 143  
 Db 85 GAKVCAERQNSQSFCTPYHGWYDSHSLIGLP-DKAYQHA--CQCHPELSLTKVKA 141  
 QY 144 -FHGFIYGCFOEAAPPLMDYLGAAWLYLPEPMFKHS--GGLELVGPPGKVVIVKANWKAFAEN 201  
 Db 142 VYRNLFTVHAARQPSLETLYLQAKYIDILICQDSAELEIIPGFEHSIKANWKLAE 201  
 QY 202 FVGDAVHGWTHASSLRSGESIFSSLAGNAALPPGAGLQMTSKYSGMGVLDGYSGVH 261  
 Db 202 GV-DAYHLPPFAHKKRYLEYLNTL-----GTDPEHSHKRRHGRG-BALNGHALII 246  
 QY 262 S-----ADLVPE-LMAFGGAKQERLNKEIGDVRIYRSHLNTCTVFPN--N 304  
 Db 247 SGPESTGPIAYNSPLPEALKPSIAKPERLVERFGQARAEIDIAHTNKSLSLFFPNLVIN 306  
 QY 305 SMLTCSGVFKVWNPIDANTTEWYTAI-VSKMPEDLKRRLADSVQRTTGPGFWSDDND 364  
 Db 307 DILGLN--IRSFPTADEVSVTVWGAGPADREERAAFINGLISFIPGGGFGTDDVE 364  
 QY 365 NMTASQNGKYSQSRDLSNLGFGEDVYGVDAVPGVVKSAIGSETSYRGFYRAY 420  
 Db 365 ILESCQ--RAYAH-----AALCYSDFSRG-----MGPATRRHVDEEQNGRQWREW 407

## RESULT 7

US-09-252-991A-17164  
 ; Sequence 17164, Application US/09252991A  
 ; Patent No. 6551795

## GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142



```

; APPLICANT: Hanson D., Andrew
; APPLICANT: Rathinasabapathi, Bala
; APPLICANT: Burnet, Michael
; TITLE OF INVENTION: Polynucleotides Encoding Choline Monooxygenase and
; TITLE OF INVENTION: Plants Transformed Therewith
; FILE REFERENCE: UP-162
; CURRENT APPLICATION NUMBER: US/09/004,393B
; CURRENT FILING DATE: 1998-01-08
; PRIOR APPLICATION NUMBER: 60/035,147
; PRIOR FILING DATE: 1997-01-08
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 4
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Beta vulgaris
US-09-004-393B-4

Query Match          9.3%; Score 224; DB 4; Length 446;
Best Local Similarity 27.4%; Pred. No. 5e-13;
Matches 58; Conservative 37; Mismatches 97; Indels 20; Gaps 6;

Qy 11 ESGLSQKHLIHGDELFQHELKTFARWNLFLTHDSLIPAGDYVTAKMGIDEVIVSRQN 70
Db 99 EDALTPSTWYTEPAFYSHLELIFYKGMQVAGYSEQVKEKNQYFTGSLGNVEVLVSRDG 158
Qy 71 DGSIRAFNVCRHGKTLVSVVAGNAKGFVCSYHGMGFGNGELQSVFPFKOLYGESLNK 130
Db 159 QGELHAFHNVCTHRA-SILACGSKKSCFCVPHGVYGLDGLAKA--SKATETQNLDP 215
Qy 131 KCLGKEVARVESPHGIYCFQDEAPPLMD-----YLGDA-----AWLEPMFKHGGLE 181
Db 216 KELGLAPL-KVAEGPFLISLDSLNDANADVGTETWIGKSAEDVKAHAFDPLNLFKTHRSE 274
Qy 182 LVGPPGKVKVIAKNAKPAENFVGDYHVGWTH 213
Db 275 F-----PMECNWKFCDNYLDSSYHVPYAH 299

RESULT 11
US-09-004-393B-2
; Sequence 2, Application US/09004393B
; Patent No. 6310271
; GENERAL INFORMATION:
; APPLICANT: Hanson D., Andrew
; APPLICANT: Rathinasabapathi, Bala
; APPLICANT: Burnet, Michael
; TITLE OF INVENTION: Polynucleotides Encoding Choline Monooxygenase and
; TITLE OF INVENTION: Plants Transformed Therewith
; FILE REFERENCE: UP-162
; CURRENT APPLICATION NUMBER: US/09/004,393B
; CURRENT FILING DATE: 1998-01-08
; PRIOR APPLICATION NUMBER: 60/035,147
; PRIOR FILING DATE: 1997-01-08
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 2
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Spinacia oleracea
US-09-004-393B-2

Query Match          9.3%; Score 223; DB 4; Length 439;
Best Local Similarity 30.1%; Pred. No. 6.1e-13;
Matches 58; Conservative 38; Mismatches 83; Indels 14; Gaps 7;

Qy 27 FQHELKTFARWNLFLTHDSLIPAGDYVTAKMGIDEVIVSRQDGSIFAFLNVCNRGK 86
Db 108 YSHELGRIFYKGMQVAGISDQKEPNQYFTGSLGNVEYLVSRDGEKGKVAHFNVCTHRA- 166
Qy 87 TLVSVEAGNAKGFVCSYHGMGFGNGELQSVPEPKOLYGESLNKCKLGLKEVARVESPHG 146
Db 167 SILACGSKKSCFCVPHGVYGLDGLAKAKAP--EQNLDPKELGLVPL-KVAVMGF 223

```

```

Qy 147 FIYGCDFQDEAPPLMD-----YLGDAWVLEBPMFKHS--GGLELVGPPGKVVIVKANWKAPAE 200
Db 224 FVLISLDRSLBEGDVGTEWLGTSA---EDVKAHAFDPSLQFI-HRSEFPMESNWKIFSD 279
Qy 201 NFVGDAHYHVGWTH 213
Db 280 NYLDSSYHVPYAH 292

```

## RESULT 12

```

US-08-810-009-19
; Sequence 19, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-810-009-19

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```

Query Match          7.7%; Score 185; DB 3; Length 35;
Best Local Similarity 94.3%; Pred. No. 5.6e-11;
Matches 33; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

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Qy 79 NVCRHGRKTLVSVVAGNAKGFVCSYHGMGFGNGE 113
Db 1 NVCRHGRKTLVSVVAGNAKGFVCSYHGMGFGNGK 35

```

## RESULT 13

```

US-08-810-009-20
; Sequence 20, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS

```

; NUMBER OF SEQUENCES: 65  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
 ; STREET: P.O. Drawer 34009  
 ; CITY: Charlotte  
 ; STATE: No. 6211437th Carolina  
 ; COUNTRY: USA  
 ; ZIP: 28234  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/810,009  
 ; FILING DATE: 04-MAR-1997  
 ; CLASSIFICATION: 800  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Spruill, W. Murray  
 ; REGISTRATION NUMBER: 32,943  
 ; REFERENCE/DOCKET NUMBER: 5718-4  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 919-881-3140  
 ; TELEFAX: 919-881-3175  
 ; TELEX: 575102  
 ; INFORMATION FOR SEQ ID NO: 20:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 35 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS:  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; US-810-009-20

Query Match 7.2%; Score 174; DB 3; Length 35;  
 Best Local Similarity 85.7%; Pred. No. 6.4e-10;  
 Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 79 NVCRHKGKTLVSVAGNAKGFVCSYHGWGFGSNGE 113  
 Db 1 NVCRHKGKTLVSVAGNAKGFVCSYHGWGFGSNGK 35

RESULT 14  
 US-08-810-009-21

; Sequence 21, Application US/08810009  
 ; Patent No. 6211437  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Briggs, Steven P.  
 ; APPLICANT: Johal, Gurmukh S.  
 ; APPLICANT: Gray, John  
 ; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING  
 ; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS  
 ; NUMBER OF SEQUENCES: 65  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
 ; STREET: P.O. Drawer 34009  
 ; CITY: Charlotte  
 ; STATE: No. 6211437th Carolina  
 ; COUNTRY: USA  
 ; ZIP: 28234

; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: Patent in Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/810,009  
 ; FILING DATE: 04-MAR-1997  
 ; CLASSIFICATION: 800  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Spruill, W. Murray  
 ; REGISTRATION NUMBER: 32,943

; REFERENCE/DOCKET NUMBER: 5718-4  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 919-881-3140  
 ; TELEFAX: 919-881-3175  
 ; TELEX: 575102  
 ; INFORMATION FOR SEQ ID NO: 21:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 35 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS:  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; US-08-810-009-21

Query Match 7.0%; Score 168; DB 3; Length 35;  
 Best Local Similarity 80.0%; Pred. No. 2.4e-09;  
 Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCRHKGKTLVSVAGNAKGFVCSYHGWGFGSNGE 113  
 Db 1 NVCRHKGKTLVSVAGNAKGFVCSYHGWGFGSNGK 35

RESULT 15

US-09-252-991A-27100  
 ; Sequence 27100, Application US/09252991A  
 ; Patent No. 6551795

; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 27100  
 ; LENGTH: 629  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 ; US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;  
 Best Local Similarity 24.3%; Pred. No. 4.6e-05;

Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NNKILVSESGLSQKHLI--HGDEELFQHELTIFARN--WLFLTHDSILIPARGDYVTAKM 59  
 Db 247 SNLFFVQKRLTWKSLANHWIQKQREPTMPKXANVYACTPDELAGKP---IGRRI 303  
 QY 60 GIDDEVISQNDGSIIRAFNLVCRHKGK--TLVSVAGNAKGFVCSYHGWGFGSNGELQSV 117  
 Db 304 CDEPMVYFVGEDGRVAALDPCPHRGAPLSLGFVEDG---VLVCGYHGLAMGEDGRTRAM 360  
 QY 118 PFERKDYGESLNKCLGLKEVAR--VESFHGFY---GCFDQAPPLMDYLGDAANTLEP 172  
 Db 361 P-----GQVRGFFPCIRRFPPQERHGFVWVWFGAEQDAALIPRL---EWAESP 407  
 QY 173 MFKHSGGLELVGPGKVVIKANNAKPAENFVGDAYVGVNTHASSL-----R 218  
 Db 408 DWAYGGGL-----YHICDRLMDIDNLM-DLTHETVYHASSIGQKEIDEAPTTRVE 458  
 QY 219 SGESIFSLSLACNALPP-----EGAGL 240  
 Db 459 GDEVITSRHQNVNMAPPFWRMALRGNGL 486

Search completed: December 9, 2003, 15:45:55  
 Job time : 13 secs

GenCore version 5.1.6  
Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)  
3771.269 Million cell updates/sec

Title: US-09-843-250-34

Perfect score: 2409

Sequence: 1 MNYNNKILVSEGLSQKHLI.....AEPEHASSTWHTLTKTTDR 449

Scoring table: BIOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

Published Applications AA:\*  
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2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep.\*  
3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep.\*  
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11: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep.\*  
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14: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep.\*  
15: /cgn2\_6/ptodata/1/pubpaa/US10C\_PUBCOMB.pep.\*  
16: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pep.\*  
17: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep.\*  
18: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2409	100.0	449	11	US-09-843-250-34
2	2404	99.8	449	11	US-09-843-250-2
3	2404	99.8	449	11	US-09-843-250-14
4	2404	99.8	449	11	US-09-843-250-15
5	2404	99.8	449	11	US-09-843-250-33
6	2403	99.8	449	11	US-09-843-250-35
7	2403	99.8	449	11	US-09-843-250-36
8	2402	99.7	449	11	US-09-843-250-26
9	2402	99.7	449	11	US-09-843-250-32
10	2402	99.7	449	11	US-09-843-250-58
11	2402	99.6	449	11	US-09-843-250-59
12	2399	99.6	449	11	US-09-843-250-16
13	2394	99.4	449	11	US-09-843-250-17
14	2346	97.4	449	11	US-09-843-250-18
15	2318	96.2	449	11	US-09-843-250-19
					Sequence 34, Appl
					Sequence 2, Appl
					Sequence 14, Appl
					Sequence 33, Appl
					Sequence 15, Appl
					Sequence 35, Appl
					Sequence 26, Appl
					Sequence 32, Appl
					Sequence 58, Appl
					Sequence 59, Appl
					Sequence 16, Appl
					Sequence 17, Appl
					Sequence 18, Appl
					Sequence 19, Appl

16	2292	95.1	449	11	US-09-843-250-20	Sequence 20, Appl
17	2219	92.1	449	11	US-09-843-250-21	Sequence 21, Appl
18	2189	90.9	447	11	US-09-843-250-22	Sequence 22, Appl
19	2052	85.2	447	11	US-09-843-250-23	Sequence 23, Appl
20	1968.5	81.7	451	11	US-09-843-250-24	Sequence 24, Appl
21	735	30.5	453	9	US-09-815-242-10253	Sequence 10253, A
22	375.5	15.6	385	9	US-09-815-243-11692	Sequence 11692, A
23	375	15.6	490	10	US-09-738-626-6140	Sequence 6140, Ap
24	336.5	14.0	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
38	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
44	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl
45	105.5	4.4	951	10	US-09-924-097-15	Sequence 15, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-843-250-34

Sequence 34, Application US/09843250

Publication No. US20030022335A1

GENERAL INFORMATION:

APPLICANT: Parales, R.

APPLICANT: Gibson, D.

APPLICANT: Resnick, S.

APPLICANT: Lee, K.

TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the

FILE REFERENCE: 875.006US2

CURRENT APPLICATION NUMBER: US/09/843,250

CURRENT FILING DATE: 2001-04-26

PRIOR APPLICATION NUMBER: PCT/US99/25079

PRIOR FILING DATE: 1999-10-26

PRIOR APPLICATION NUMBER: US 60/105,575

PRIOR FILING DATE: 1998-10-26

NUMBER OF SEQ ID NOS: 65

SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 34

LENGTH: 449

TYPE: PRT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.

US-09-843-250-34

Query Match 100.0%; Score 2409; DB 11; Length 449;

Best Local Similarity 100.0%; Pred. No. 5e-226;

Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNYNNKILVSEGLSQKHLI...AEPEHASSTWHTLTKTTDR 60

DB 1 MNYNNKILVSEGLSQKHLI...AEPEHASSTWHTLTKTTDR 60

QY 61 IDEVIVSRQNDGSTRAFILNVCRRHGKTLVSEAGNAKGFVCSYHGWFSGNGELQSVFFE 120

DB 61 IDEVIVSRQNDGSTRAFILNVCRRHGKTLVSEAGNAKGFVCSYHGWFSGNGELQSVFFE 120



```
QY 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
DB 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
QY 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
DB 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
QY 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
DB 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
QY 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
DB 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
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## RESULT 2

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US-09-843-250-2
; Sequence 2, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR FILING DATE: 1999-10-26
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1
US-09-843-250-2
```

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Query Match 99.8%; Score 2404; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.5e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 MYNANKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
DB 1 MYNANKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIKRAFLNCRHGRKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
DB 61 IDEVIVSRQNDGSIKRAFLNCRHGRKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
QY 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
DB 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
QY 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
DB 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
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```
QY 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
DB 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
QY 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
DB 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
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QY 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
DB 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVTYGVGVGKSAIGTSGYRGRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVTYGVGVGKSAIGTSGYRGRAY 420
QY 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
DB 421 QAHVSSNNWAEFEHASSHTWHTLTKTTDR 449
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## RESULT 3

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US-09-843-250-14
; Sequence 14, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 14
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.
US-09-843-250-14
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Query Match 99.8%; Score 2404; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.5e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 MYNANKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
DB 1 MYNANKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIKRAFLNCRHGRKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
DB 61 IDEVIVSRQNDGSIKRAFLNCRHGRKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
QY 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
DB 121 KLYGESLNKCLGLKEAVRVSFHGPIYGCDFDQAPPLMDYLGDAAWYLEPMFKHSGGL 180
QY 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
DB 181 ELVGPFGKVKIKANWKAPEAFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240
QY 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSAADLPVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
DB 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGBDVTYGVGVGKSAIGTSGYRGRAY 420
```

Db 361 DDNDNNETASQNGKKYQSRDSDLLSLNLFGEVDYGDVYGVVGSAGTSGYRGFYAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTXTTDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTXTTDR 449

## RESULT 4

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.  
US-09-843-250-15

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.5e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
Qy 1 MNYNNKILVSESGLSQKHLIHGDEBLFQHELKTIIPARNWLFTHDLSLIPAGDYVTAKG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEBLFQHELKTIIPARNWLFTHDLSLIPAGDYVTAKG 60  
Qy 61 IDEVIVSRQNDGSIIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120  
Db 61 IDEVIVSRQNDGSIIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVFFE 120  
Qy 121 KOLYGSILNKKCLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLPFMPKHSGGL 180  
Db 121 KOLYGSILNKKCLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLPFMPKHSGGL 180  
Qy 181 ELVGPFGKVIKANKKAPAEFVGDVYGVVGSAGTSGYRGFYAY 420  
Db 181 ELVGPFGKVIKANKKAPAEFVGDVYGVVGSAGTSGYRGFYAY 420  
Qy 241 QMTSKYSGMGVLDGYSVGHSAADLPVLMFAGGAKQELNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGVLDGYSVGHSAADLPVLMFAGGAKQELNKEIGDVRARIYRSHLNTV 300  
Qy 301 FPNNSMLTCSGVFKVWNPIDANTTEVTYAI VEKOMPEDLKRRLADSVQRTGPAFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVTYAI VEKOMPEDLKRRLADSVQRTGPAFWES 360  
Qy 361 DDNDNNETASQNGKKYQSRDSDLLSLNLFGEVDYGDVYGVVGSAGTSGYRGFYAY 420  
Db 361 DDNDNNETASQNGKKYQSRDSDLLSLNLFGEVDYGDVYGVVGSAGTSGYRGFYAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTXTTDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTXTTDR 449

## RESULT 5

US-09-843-250-35  
; Sequence 35, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the

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FILE REFERENCE: 875.006US2
CURRENT APPLICATION NUMBER: US/09/843,250
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: PCT/US99/25079
PRIOR FILING DATE: 1999-10-26
PRIOR APPLICATION NUMBER: US 60/105,575
PRIOR FILING DATE: 1998-10-26
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 35
LENGTH: 449
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.
US-09-843-250-35

Query Match          99.8%; Score 2403; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.9e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAPGDYVYAKWG 60
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAPGDYVYAKWG 60
QY 61 IDEVIVSRQNDGSIKRAFLNVCVRHGRKTLVSVKAGNAKGFVCSYHGMFGSGNGLQSVVPE 120
DB 61 IDEVIVSRQNDGSIKRAFLNVCVRHGRKTLVSVKAGNAKGFVCSYHGMFGSGNGLQSVVPE 120
QY 121 KDLYGESLNKKCLGKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLYGESLNKKCLGKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSVGHSDLVPELMFAGGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSDLVPELMFAGGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVKFWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVKFWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFGBDVGDAVPGVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFGBDVGDAVPGVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFPHASSTWHTLTKTTDR 449
DB 421 QAHVSSNNWAEFPHASSTWHTLTKTTDR 449

RESULT 7
US-09-843-250-36
Sequence 36, Application US/09843250
Publication No. US20030022335A1
GENERAL INFORMATION:
APPLICANT: Parales, R.
APPLICANT: Gibson, D.
APPLICANT: Resnick, S.
TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
FILE REFERENCE: 875.006US2
CURRENT APPLICATION NUMBER: US/09/843,250
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: PCT/US99/25079
PRIOR FILING DATE: 1999-10-26
PRIOR APPLICATION NUMBER: US 60/105,575
PRIOR FILING DATE: 1998-10-26
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 36
LENGTH: 449
TYPE: PRT
ORGANISM: Pseudomonas sp.
US-09-843-250-36

Query Match          99.7%; Score 2402; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 2.4e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

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FILE REFERENCE: 875.006US2
CURRENT APPLICATION NUMBER: US/09/843,250
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: PCT/US99/25079
PRIOR FILING DATE: 1999-10-26
PRIOR APPLICATION NUMBER: US 60/105,575
PRIOR FILING DATE: 1998-10-26
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 36
LENGTH: 449
TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.
US-09-843-250-36

Query Match          99.8%; Score 2403; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.9e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAPGDYVYAKWG 60
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIFARNMLFLTHDSLIPAPGDYVYAKWG 60
QY 61 IDEVIVSRQNDGSIKRAFLNVCVRHGRKTLVSVKAGNAKGFVCSYHGMFGSGNGLQSVVPE 120
DB 61 IDEVIVSRQNDGSIKRAFLNVCVRHGRKTLVSVKAGNAKGFVCSYHGMFGSGNGLQSVVPE 120
QY 121 KDLYGESLNKKCLGKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLYGESLNKKCLGKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSVGHSDLVPELMFAGGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVGHSDLVPELMFAGGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVKFWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVKFWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFGBDVGDAVPGVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFGBDVGDAVPGVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFPHASSTWHTLTKTTDR 449
DB 421 QAHVSSNNWAEFPHASSTWHTLTKTTDR 449

RESULT 8
US-09-843-250-36
Sequence 26, Application US/09843250
Publication No. US20030022335A1
GENERAL INFORMATION:
APPLICANT: Parales, R.
APPLICANT: Gibson, D.
APPLICANT: Resnick, S.
TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
FILE REFERENCE: 875.006US2
CURRENT APPLICATION NUMBER: US/09/843,250
CURRENT FILING DATE: 2001-04-26
PRIOR APPLICATION NUMBER: PCT/US99/25079
PRIOR FILING DATE: 1999-10-26
PRIOR APPLICATION NUMBER: US 60/105,575
PRIOR FILING DATE: 1998-10-26
NUMBER OF SEQ ID NOS: 65
SOFTWARE: FastSeq for Windows Version 4.0
SEQ ID NO 26
LENGTH: 449
TYPE: PRT
ORGANISM: Pseudomonas sp.
US-09-843-250-26

Query Match          99.7%; Score 2402; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 2.4e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

QY 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120  
DB 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120  
QY 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGSGMGLWDGYSVHSDIYVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGSGMGLWDGYSVHSDIYVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGBDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGBDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449

RESULT 9

US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralee, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match 99.7%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-225;  
Matches 449; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120  
DB 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120

QY 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGSGMGLWDGYSVHSDIYVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGSGMGLWDGYSVHSDIYVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGBDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGBDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449

RESULT 10

US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralee, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.  
US-09-843-250-58

Query Match 99.7%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-225;  
Matches 449; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MNYNNKILVSRSGLSQKHLIHGDEBELFOHELKTIFARNWLFTHDSLIPAPGDYVTAKWG 60

QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120  
DB 61 IDEVIVSRQNDGSIKRAFLNVCRRHCKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVVPE 120  
QY 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KDLGESLNKCKLGLKEVARVESFHGTYGCFDQEAAPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIVKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGSGMGLWDGYSVHSDIYVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300

Db 241 QMTSKYSGMGLWDGYSVHSDLPVLPALFAGKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
QY 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449

RESULT 11  
US-09-843-250-59  
; Sequence 59, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 59  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.  
US-09-843-250-59

Query Match 99.7%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MTNNKILVSESGLSQKHLHGDEELFQHELKTIFARNWLFTHDSLIPAGDYVTAKMG 60  
Db 1 MTNNKILVSESGLSQKHLHGDEELFQHELKTIFARNWLFTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHGTILSVSEAGNAGKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIKRAFLNVCRRHGTILSVSEAGNAGKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDIYGESLNKKCLGLKEVARVESFHGTYGCFDQEPALMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDIYGESLNKKCLGLKEVARVESFHGTYGCFDQEPALMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVVVKANWKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVVVKANWKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLWDGYSVHSDLPVLPALFAGKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLPVLPALFAGKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
QY 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420

Db 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449

RESULT 12  
US-09-843-250-16  
; Sequence 16, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 16  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.6%; Score 2399; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 4.7e-225;  
Matches 447; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 MTNNKILVSESGLSQKHLHGDEELFQHELKTIFARNWLFTHDSLIPAGDYVTAKMG 60  
Db 1 MTNNKILVSESGLSQKHLHGDEELFQHELKTIFARNWLFTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHGTILSVSEAGNAGKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIKRAFLNVCRRHGTILSVSEAGNAGKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDIYGESLNKKCLGLKEVARVESFHGTYGCFDQEPALMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDIYGESLNKKCLGLKEVARVESFHGTYGCFDQEPALMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVVVKANWKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVVVKANWKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLWDGYSVHSDLPVLPALFAGKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLPVLPALFAGKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVNPIDANTTEWVTYAIIVEKMPEDLKRLADSVQRTTGPAGFWES 360  
QY 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASONGKKYQSRSDLLSNLGFGEVDYGVDAVYGVVGVKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449

RESULT 13  
US-09-843-250-17

```
; Sequence 17, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Perales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; SOFTWARE: FastSeq for Windows Version 4.0
; NUMBER OF SEQ ID NOS: 65
; SEQ ID NO 17
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:6.
US-09-843-250-17

Query Match          99.4%; Score 2394; DB 11; Length 449;
Best Local Similarity 99.3%; Pred. No. 1.4e-224;
Matches 446; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 MYNNKILVSEGLSOKHLHGDELFQHELTIFARNWLFTHDSLIAPAGDYVTAKMG 60
DB 1 MYNNKILVSEGLSOKHLHGDELFQHELTIFARNWLFTHDSLIAPAGDYVTAKMG 60

QY 61 IDEVIVSRQDGSIRAFNLVCRHRGKTLVSVFAGNAKGFVCSYHGWGFGSNGELQSVPE 120
DB 61 IDEVIVSRQDGSIRAFNLVCRHRGKTLVSVFAGNAKGFVCSYHGWGFGSNGELQSVPE 120

QY 121 KDLVGSINLKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLVGSINLKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPFKHSGGL 180

QY 181 ELVGPFGKVVIKANWKAPAENFVGDAHVGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVIKANWKAPAENFVGDAHVGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTTGPAGFWES 360

QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449

RESULT 14
US-09-843-250-18
; Sequence 18, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Perales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
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; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; SOFTWARE: FastSeq for Windows Version 4.0
; NUMBER OF SEQ ID NOS: 65
; SEQ ID NO 18
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.
US-09-843-250-18

Query Match          97.4%; Score 2346; DB 11; Length 449;
Best Local Similarity 96.7%; Pred. No. 6.9e-220;
Matches 434; Conservative 10; Mismatches 5; Indels 0; Gaps 0;

QY 1 MYNNKILVSEGLSOKHLHGDELFQHELTIFARNWLFTHDSLIAPAGDYVTAKMG 60
DB 1 MYNNKILVSEGLSOKHLHGDELFQHELTIFARNWLFTHDSLIAPAGDYVTAKMG 60

QY 61 IDEVIVSRQDGSIRAFNLVCRHRGKTLVSVFAGNAKGFVCSYHGWGFGSNGELQSVPE 120
DB 61 IDEVIVSRQDGSIRAFNLVCRHRGKTLVSVFAGNAKGFVCSYHGWGFGSNGELQSVPE 120

QY 121 KDLVGSINLKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLVGSINLKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPFKHSGGL 180

QY 181 ELVGPFGKVVIKANWKAPAENFVGDAHVGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVIKANWKAPAENFVGDAHVGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTTGPAGFWES 360

QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449

RESULT 15
US-09-843-250-19
; Sequence 19, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Perales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19
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; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: Xaa = any amino acid.
US-09-843-250-19

Query Match          96.2%; Score 2318; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 3.7e-217;
Matches 429; Conservative 12; Mismatches 8; Indels 0; Gaps 0;

QY 1 MNYNKKILVSSSGLSQKLIHGDELFQHELFKTFARNWLFTHDSLIIPAGDYVTAKMG 60
Db 1 MNYNKKILVSSSGLTQKLIHGDELFQHELFKTFARNWLFTHDSLIIPSGDYVTAKMG 60

QY 61 IDEVIVSRQDGSIRAPLNVCRHRGKTIVSVAGNAKGFVCSYHGMGFGSGNGELQSVPE 120
Db 61 IDEVIVSRQDGSIRAPLNVCRHRGKTIVSVAGNAKGFVCSYHGMGFGSGNGELQSVPE 120

QY 121 KDLXGESLNKXCLGLKEVARVESFHGTYGCFDQEPPLMDYLGDAAWYLEPMPKHSGL 180
Db 121 KDLXGESLNKXCLGLKEVARVESFHGTYGCFDQEPPLMDYLGDAAWYLEPMPKHSGL 180

QY 181 ELVGPPGKVIKANWKAPAEFVGDVAVHVGWTHASSLSRSGESIFSSLAGNNALEPPGAGL 240
Db 181 ELVGPPGKVIKANWKAPAEFVGDVAVHVGWTHASSLSRSGESIFSSLAGNNALEPPGAGL 240

QY 241 QMTSKYSGSGMGLMDYGSVHSADIVPELMAFGGAKQERLNKEICDVRARIYRSHLNTV 300
Db 241 QMTSKYSGSGMGLMDYGSVHSADIVPELMAFGGAKQERLNKEICDVRARIYRSHLNTV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTTGPAGFWES 360
Db 301 FPNNSVLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADAVQRTVGPAGFWES 360

QY 361 DDNDNMETASQNGKXQGRDSDLSNLGFGDVTYGDVYPGVCKSAIGTSTYRGFYRAY 420
Db 361 DDNDNMETASQNGKXQGRDSDLSNLGFGDVTYGDVYPGVCKSAIGTSTYRGFYRAY 420

QY 421 QARVSSSNWAEPEHASSTWHTLTKTTDR 449
Db 421 QARVSSSNWAEPEHASSTWHTLTKTTDR 449
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Search completed: December 9, 2003, 16:09:34  
Job time : 23.1429 secs

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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-2

Perfect score: 2408

Sequence: 1 MYNKNILVSEGLSQKHLI.....AEPEHASTWHTLTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database: Issued Patents AA.\*

- 1: /cgm2\_6/ptodata/1/iaa/5A COMB.pep.\*
- 2: /cgm2\_6/ptodata/1/iaa/5B COMB.pep.\*
- 3: /cgm2\_6/ptodata/1/iaa/6A COMB.pep.\*
- 4: /cgm2\_6/ptodata/1/iaa/6B COMB.pep.\*
- 5: /cgm2\_6/ptodata/1/iaa/PTCUS COMB.pep.\*
- 6: /cgm2\_6/ptodata/1/iaa/backfile1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	408.5	17.0	463	4	US-09-252-991A-31367
2	407.5	16.9	496	4	US-09-328-352-6452
3	388	16.1	445	4	US-09-328-352-7248
4	385	16.0	466	4	US-09-252-991A-31385
5	364	15.1	471	4	US-09-328-352-7581
6	348.5	14.5	425	4	US-09-252-991A-25088
7	295	12.3	449	4	US-09-252-991A-17164
8	280.5	11.6	375	4	US-09-328-352-4700
9	237.5	9.9	529	4	US-09-252-991A-19627
10	224	9.3	446	4	US-09-004-3938-4
11	223	9.3	439	4	US-09-004-3938-2
12	185	7.7	35	3	US-08-810-009-19
13	174	7.2	35	3	US-08-810-009-20
14	168	7.0	35	3	US-08-810-009-21
15	143.5	6.0	629	4	US-09-252-991A-27100
16	128	5.3	392	4	US-09-328-352-6765
17	118.5	4.9	354	4	US-08-976-0638-4
18	112.5	4.7	379	3	US-09-028-934-36
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-14
21	109	4.5	622	4	US-09-311-6268-4
22	108	4.5	35	3	US-08-810-009-13
23	106	4.5	35	3	US-08-810-009-15
24	106	4.4	35	3	US-08-810-009-9
25	106	4.4	364	4	US-09-328-352-4956
26	104	4.3	35	3	US-08-810-009-18
27	103.5	4.3	432	3	US-08-809-326A-16

28	103.5	4.3	432	4	US-09-689-914A-16	Sequence 16, Appl
29	103.5	4.3	432	4	US-09-689-913A-16	Sequence 16, Appl
30	103.5	4.3	432	4	US-09-689-916A-16	Sequence 15, Appl
31	103.5	4.3	649	3	US-08-809-326A-15	Sequence 15, Appl
32	103.5	4.3	649	4	US-09-689-914A-15	Sequence 15, Appl
33	103.5	4.3	649	4	US-09-689-913A-15	Sequence 15, Appl
34	103.5	4.3	649	4	US-09-689-916A-15	Sequence 15, Appl
35	103	4.3	35	3	US-08-810-009-11	Sequence 11, Appl
36	102	4.2	35	3	US-08-810-009-8	Sequence 8, Appl
37	102	4.2	35	3	US-08-810-009-10	Sequence 10, Appl
38	101	4.2	17	3	US-08-810-009-44	Sequence 44, Appl
39	101	4.2	17	3	US-08-810-009-45	Sequence 45, Appl
40	100.5	4.2	363	4	US-09-328-352-5961	Sequence 5961, Ap
41	100	4.2	35	3	US-08-810-009-17	Sequence 17, Appl
42	99.5	4.1	256	4	US-09-325-932A-57	Sequence 57, Appl
43	99	4.1	1132	4	US-09-198-452A-466	Sequence 466, App
44	97.5	4.0	395	4	US-09-252-991A-28371	Sequence 28371, A
45	95	3.9	17	3	US-08-810-009-46	Sequence 46, Appl

#### ALIGNMENTS

RESULT 1  
US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCES: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; PRIOR FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31367  
; LENGTH: 463  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31367

Query Match 17.0%; Score 408.5; DB 4; Length 463;  
Best Local Similarity 29.0%; Pred. No. 1.4e-30;  
Matches 110; Conservative 69; Mismatches 149; Indels 51; Gaps 17;  
QY 23 DBELFQHELTIFARNWLFTHDSLIPAPGDVYVYAKMGIDVIVSRQNDGSTRFLNVC 82  
Db 38 DPLLELEKXHFEGNWWYLAHESQVAGVNDVLTQIGRQSIIVARNRDGQNAFINACS 97

QY 83 HRGKTLVSEAGNAKGVCSYHGWGFGSNGELQSY--PFKDLYGESLNKCKLG---LKE 137  
Db 98 HRGAMLCRHKSGNRSGYTPPHGWTFFNNSGKLLVKDPAEAG-YPQGFN--CEGSHDLTR 154

QY 138 VARVESFHGFIYGCDFQDQAPPLMDYLGDAWYLEMPKHS--GGLELVGPPGKVIVKANWK 196  
Db 155 VARFESYRGFLGSLNPDVVRFLAEHLGESAKIIDVMDQSPGSEGLVGLSSSYVEGNWK 214

QY 197 APAENFVGDAHVHG---WTHASS-----LRSGESIFSLAGNALPEGAGLQ 241  
Db 215 LTAEN-GADGTHVSVVHNYATQSQRQORDAADPLT-----MSAAGWAR---QGGFY 265  
QY 242 MTSKYGSGMGLWDGYSGVHSADLVPE-LMAFGGAKQERLNKEIGDVPAR-IYRSHLNCT 299  
Db 266 ---SPEHGHMLLSRWAN-----PEDRPAP---ERRAELARDFGEAPADWNIENRNL 313  
QY 300 VFPNNMGL-TCSGVFKVKNPDIDANTTEVTVTAIVKEMPEDLKRLADSVQRTVGPAGFW 358  
Db 314 LYPNVYLMQDFSSQIRIARPLSVDRTEITTYCIAPKGESAEARARRIRQVDFNFVSGMA 373



QY 359 ESDNDNMETASQNGKKYQ 377  
 Db 374 TPDDLERSQCG---YQ 389  
 RESULT 2  
 US-09-328-352-6452  
 ; Sequence 6452, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 6452  
 ; LENGTH: 496  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-6452  
 Query Match 16.9%; Score 407.5; DB 4; Length 496;  
 Best Local Similarity 31.3%; Pred. No. 2e-30;  
 Matches 105; Conservative 59; Mismatches 146; Indels 25; Gaps 13;  
 QY 23 DEELFQHELKTIIPARNWFLTHDSLIPAGDYVTAKMGIDVIVSRQNDGSIRAFNLVCR 82  
 Db 73 DEALFDEMKYIEGWNVYLAHESQIENNDYTTTIGRQPIIARRNGELNMINACS 132  
 QY 83 HRGKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPFKDL-YGESLNKK-CLGLKEVAR 140  
 Db 133 HRGAQLCRYKGNKATYTCFPHGWTNNKSLKLVKVDPTDAGYSDCFNGDGHDLKKVAR 192  
 QY 141 VESFHGFLYCGFOEAPPLMDYLGDAWYLEPMFKHS-GGLELVGPPGKVIKANWAPA 199  
 Db 193 FESYKGLFGLSLNPDVSELEFLGETTKIIMIVDQSEHGLEVLGRSSTVYEGNWKATA 252  
 QY 200 ENFVGDAYHVG---WTHASSLRSGESIFSSLAGNAALPPGA-GLQWTSYK--SGMVL 253  
 Db 253 EN-GADYHVSVAHWYVAATQRIE--TOADNIRAMSAGSWGKGQGGSYGFENGHML 309  
 QY 254 WDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRAR--IYRSHLACTVFPNNSMLTCSG 311  
 Db 310 WTQWAMPEDRPNFP-----KADEYTKYGEAMSKWMLERS-NLCYFNVYLDQFG 360  
 QY 312 -VPKWNPIDANTTEVWYVAIVEK-DMPDLKRL 344  
 Db 361 SQIRVLRPLSVNRTEVTIYCIAPGKAPEARARI 395  
 RESULT 3  
 US-09-328-352-7248  
 ; Sequence 7248, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 7248  
 ; LENGTH: 445  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7248  
 Query Match 16.1%; Score 388; DB 4; Length 445;  
 Best Local Similarity 28.1%; Pred. No. 1.2e-28;  
 Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 IHGDBELFQHELKTIIPARNWFLTHDSLIPAGDYVTAKMGIDVIVSRQNDGSIRAFNL 79  
 Db 47 LYKDERIFDEEMEKIFYSTWVAHASEIPEGSGYKTTINIGKQPVVWVDRKKKVVHLIN 106  
 QY 80 VCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPFKDL-YGESLNKK-CLGLKEVA 139  
 Db 107 RCHRAATVCEHKKGKNTSFVCPYHNSYALDGLRGVP-SPESYQDCLDKSELPLVSL- 164  
 QY 140 RVSEFHGFLYCGFOEAPPLMDYLGDAWYLEPMFKHSGG--LELVGP-----PGKVVIK 192  
 Db 165 RVEEYNGMIFASFKEDIQPLEEFLGAKWIDLFMKQAGYPIKVLGHRFRFPG----- 219  
 QY 193 ANWKAPARNFVGDVHVGWTHASSLR-----GESIFSSLAGNAALPPGAGLQWTSYKGS 248  
 Db 220 -NWKIQLN-TTDAYHFLVHKSFLLSSVDEKTEELFN-----PEN 257  
 QY 249 GNGVLWDGYSGVHSADLVPELMAFGAKQER-LNKEIGDVR-----ARIYR- 293  
 Db 258 QFGFVEDLGNHSHVMVMIPELVLEEDLWERPIQERFEDLAQALRDEGHEELEVRIVRA 317  
 QY 294 ---SHLNCYVFPNNSMLTCS-GVFKWNPIDANTTEVWYVAIVEK-----MPEDLKRELA 345  
 Db 318 VGGSGFNLLNFPN---IACSMAFFRVLQPISSVAETEI-HHSVITMDGGFQIANQVRLRLH 373  
 QY 346 DSVQRTVGPAGFWESDDNDNMETASQNGKYSQSDSLSLNIGFGEDYVGDVYGVGVG- 404  
 Db 374 EHFQ---GPFQGTGTPDDSEAWERV-OGAN-AGNDLWIMLRGL-----PGEVKT 418  
 QY 405 ----KSAI-GETSYRGFYRAYQ 421  
 Db 419 EDGLKSDVSVAETGMEAAQQMK 440  
 RESULT 4  
 US-09-252-991A-31385  
 ; Sequence 31385, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; FILE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 31385  
 ; LENGTH: 466  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-31385  
 Query Match 16.0%; Score 385; DB 4; Length 466;  
 Best Local Similarity 26.1%; Pred. No. 2.6e-28;  
 Matches 116; Conservative 72; Mismatches 157; Indels 100; Gaps 18;

QY 23 DEELFQHELKTIIPARNWFLTHDSLIPAGDYVTAKMGIDVIVSRQNDGSIRAFNLVCR 82  
 Db 39 EPFLFDELMELIFEKNWYACHESSELRPHDPFTLRAGRQPLIVTRDNGQLHLVDACQ 98  
 QY 83 HRGKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSV--PFEKLYGESLNKK-CLGLKEVAR 140  
 Db 99 HRGATLVKVGKNSQSTETCTPFWKVCYKNDGRLVKVAPGE---YPEGFDKATRLKLR-AR 154  
 QY 141 VESFHGFLYCGFOEAPPLMDYLGDAWYLEPMFKH--SGGLELVGPPGKVIKANWKA 197  
 Db 155 IQSTRGFVFLVSLVAGEDDLVDFLGDAVFLDMLVAQSPSGSELEVLFGTGTYYTEGNWKL 214  
 QY 198 PAENFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPGAGLQMT---SKYSGMGVL- 253

Db 215 QNENGL-DGHHVSTVHNYV-----ATVQRQVVEAERGVAATLDYKLGAGDAATD 266  
 QY 254 --WDYSGVHS-----ADLPELMAFGAKQERLNKEIGDVRIYRSHL 296  
 Db 267 DGNFSPANGHSVLESEPNPAVRPGYASVMPRLVA-----BYQARAFEMWHR 315  
 QY 297 -NCTVFPNML-TCGSGVKVNPIDANTTEVTYTAIVEKMPDLKRLADSQRTVGP 354  
 Db 316 RNLMYPSLFDIQISSQLRIVREPLAWNTEI-----VSQIGV 354  
 QY 355 AGFWESDDNMETASQNGKKYQSRDSDLLNLGFGEDVDGDAVPGVKGSAIGTSYR 414  
 Db 355 KG--ESD-----ADENRIQEPEDFNVSQMGTPDDL-----VEFR 388  
 QY 415 GFYRAYQAHVSSSNWAEFHASSTW 439  
 Db 389 EAQGFQARL--ERNDSIRCHGKW 411

## RESULT 5

US-09-328-352-7581  
 ; Sequence 7581, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 7581  
 ; LENGTH: 471  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7581

Query Match 15.1%; Score 364; DB 4; Length 471;  
 Best Local Similarity 25.8%; Pred. No. 2.7e-26;  
 Matches 114; Conservative 70; Mismatches 180; Indels 78; Gaps 16;  
 QY 23 DEELFQHELKTIIPARNWLFTHDSLIPAPDYVTAKMGIDIVISRONDCSIRAFINVC 82  
 Db 35 EPELDELMEFIFEKVIWYACHSEIPINNHDFLTQIGROPITVSRDGGKELHAWNACE 94  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSPPEKDYCESLNKCKLGLKEVARVE 142  
 Db 95 HRGATLTVAKGNQSTFTCPFHAWCYKSDGRUVKVPSE-YCEDFDKSSRGLKQ-GRIA 152  
 QY 143 SFHGFTYGCDDQBA-PPLMDYLGDAAWYLEPMPKHS--GGLELVGPPGKVKVIANWKAPA 199  
 Db 153 SYRGFVFLSDTQATDSLEDFLDGAKLEFLDMVNSQPTGELEVLQCKSSVTAGNKLQN 212  
 QY 200 ENFVGDAYHVGWTH--ASLSRSGESIFSLAGNAALPPEGAGLQMT--SKYSGMGVLW 254  
 Db 213 ENGL-DGHHVSTVHNYVSTVQHRQVNAS-----KGAEFLDTLDSKLGAGDSETD 262  
 QY 255 DGYSGVHSADLV-----PELMAFGAKQERLNKEIGDVRIYRSHL-NCTVFPNNSM 306  
 Db 263 DGNFSPANGHSVLESDMPNPTVPGSYVMPYVVEKYGEKIAEWAMRLNLMYPSLFF 322  
 QY 307 L-TCGSGVKVNPIDANTTEVTYTAIVEKMPDLKRLADSQRTVGPAGFWESDDND 365  
 Db 323 MDQISSQLRIVREPVANNKTEV-----ISQCIGYKG--ES----- 354  
 QY 366 METASQNGKKYQSRDSDLLNLGFGEDVDGDAVPGVKGSAIGTSYRGTFRAYQAHVS 425  
 Db 355 --TEARNRIQEPEDFNVSGLGTPDDL-----VEFREQKQGFQARD- 394  
 QY 426 SSNWAEFHASSTWHTLTKTT 447  
 Db 395 -ERNDSIRGCQSQWEYGATNS 415

## RESULT 6

US-09-252-991A-25088  
 ; Sequence 25088, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 25088  
 ; LENGTH: 425  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-25088

Query Match 14.5%; Score 348.5; DB 4; Length 425;  
 Best Local Similarity 27.4%; Pred. No. 6.9e-25;  
 Matches 114; Conservative 72; Mismatches 177; Indels 53; Gaps 15;

QY 25 ELFQHELKTIIPARNWLFTHDSLIPAPDYVTAKMGIDIVISRONDCSIRAFINVC 84  
 Db 25 ELHRRELHEIFDDSWLYAAHLSELREPQGFITRDVGRNLIQRRADGEPAYVLNACAR 84  
 QY 85 GKTLSVVEAGNAKGFVCSYHGWGFGSNGELQSPPEKDYCESLNKCKLGLKEVARVE- 143  
 Db 85 GAKVCAERQSGNSQRTFCPTHGWTYDSHSLGLP-DKAAVQHA--GQCHPELSLTVKHA 141  
 QY 144 -PHGFTYGCDDQBA-PPLMDYLGDAAWYLEPMPKHS--GGLELVGPPGKVKVIANWKAPAEN 201  
 Db 142 VYRNLFTHIYAAARQSLTYLGOAKYIDLICDQSEAELEIIPGFEHSIKANWLLAEN 201  
 QY 202 FVGDAYHVGWTHASSLSRSGESIFSLAGNAALPPEGAGLQMTSKYSGMGVLWDGYSVH 261  
 Db 202 GV-DAYHLFPAHKRYLYLNTL-----GTDPESHKRGHGRG-EALGNHALII 246  
 QY 262 S-----ADLVEP-LMAFGAKQERLNKEIGDVRA--IVRSHLNCVTPN---N 304  
 Db 247 SGPPSTGRPIAYVNSPLPPEALKPSTAAKPERLVRFRGOARAEIDTAHTNKSIFFPNLVIN 306  
 QY 305 SMLTCSGVKVNPNIDANTTEVTYTAIVEKMPDLKRLADSQRTVGPAGFWESDDND 364  
 Db 307 DILGLN--IRSFEPAADEVSVTVWGAGFADREERAARINGLISFIGPGGFGTDPDVE 364  
 QY 365 NMETASQNGKKYQSRDSDLLNLGFGEDVDGDAVPGVKGSAIGTSYRGTFRAY 420  
 Db 365 ILESCQ---RAYAH-----AALGYSDFSRG---MGPATRRHVDEEQNGRQFWREW 407

## RESULT 7

US-09-252-991A-17164  
 ; Sequence 17164, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 17164  
 LENGTH: 449  
 TYPE: PRT  
 ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-17164

Query Match  
 Best Local Similarity 12.3%; Score 295; DB 4; Length 449;  
 Mismatches 111; Conservative 54; Mismatches 159; Indels 96; Gaps 17;

QY 23 DEELFOHELKTIAPRWLFLTHSLIPAPGDYVTAAGIDEVIVSRQNDGSIAPFLNVC 82  
 DB 60 DQRLFEIDMOEIFHKEWLLIAGMTCEIPAKGNFLTLQIGKNPLVIRGAEGQVHAFNVC 119  
 QY 83 HRGKTLVSVBAGNAKGVCSYHGWGFGSGNGLQSPFEKDLGYSLNKKGICLKEVARVE 142  
 DB 120 HRSRLCVSEKGVAKLVCPYHQWYELDGLL---FAGTEMGADFMKEYIGLKP1-QVK 175  
 QY 143 SFHGFYICDFQDAPPLMDYLGDAWYLEPMFKHSGGLELVGPGKVWK-----ANWK 196  
 DB 176 TAGGYTIPISLAENPPAIDDFLATLEHYMEPYDMEN-----AKVAVQTTIREAANK 226  
 QY 197 APAENFVGDAYHGWTHASSLSRSGESIFSSLAGNAALPPGAGLQMTSKYSGMGVWDG 256  
 DB 227 LVLEN-NREYHCNGSPFLK-----TLEWDDVTDPRAS--QAFQDQVAACTSAWD- 276  
 QY 257 YSGVHSADLVPELMA-FG-----GAKQ---ERLNKEIGDVRA 289  
 DB 277 -----AEKIPYAHASGLRNRIVRMLDGTVMWDGQSGSKLMGRKINPDLASMI 330  
 QY 290 RIVRSHLNCVFPNNSMLTCSG---VFQVWNPIDANTTEVWTYAIIVEKMP- 338  
 DB 331 ---LHL-----PHSNHNCMGDHLIVFTYV-PISAQETLVTTKVLVHKOAVEGVYDVA 379  
 QY 339 -----DLKRLADSVQRTVVGAGFWESDDNDNMTASONGKYSQSRDLSNLG 388  
 DB 380 RLREVDWATNDQRRLAENQRGINSDAYQPGYSKYTFEGVINFLDWTYS--ERMLNNLG 437

## RESULT 8

US-09-328-352-4700  
 Sequence 4700, Application US/09328352  
 Patent No. 6562958  
 GENERAL INFORMATION:  
 APPLICANT: Gary L. Breton et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: GPC98-03PA  
 CURRENT APPLICATION NUMBER: US/09/328,352  
 CURRENT FILING DATE: 1999-06-04  
 NUMBER OF SEQ ID NOS: 8252  
 SEQ ID NO 4700  
 LENGTH: 375  
 TYPE: PRT  
 ORGANISM: Acinetobacter baumannii  
 US-09-328-352-4700

Query Match  
 Best Local Similarity 11.6%; Score 280.5; DB 4; Length 375;  
 Mismatches 97; Conservative 58; Mismatches 130; Indels 85; Gaps 17;

QY 19 LIHDELFQHELKTIAPRWLFLTHSLIPAPGDYVTAAGIDEVIVSRQNDGSIAPFLNVC 78  
 DB 28 VFTTSQVPEHEKEVIFAKSWICVAHSGELAQPNIDYITRKVIGENIVIRGKDSVLRAFY 87  
 QY 79 NVCKHRGKTLVSVBAGNAKGV-CYHGWGFGSGNGLQSV-----PFKDLGYSLNK 130  
 DB 88 NVCPHRGHELTS-GSGAKRNVITCPYHAWTFKLDGSLALARNCDHVESFDK-----NS 140  
 QY 131 KCLGLKEVARVESFHGFYICDFQDAPPLMDYLGDAWYLEPMFKHSGGLELVGPGKV 190  
 DB 141 SMVPLK-----VEYAGVFVFNNDENATCVEDQL---PGFAERLNQAGGVKDKLKAARFV 193

QY 191 IK--ANNKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPGAGLQMTSKYGS 248  
 DB 194 TETPANKVIVDNYM-ECYHCGPAH-----PGFADSVQDKTWH 231  
 QY 249 GNGVLWDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCVTF---PNNS 305  
 DB 232 TTHQNWTLQYG-----FARSSEKSFKLDPSVTDPEFHGEWT-WPCTMENVPVPGSN 280  
 QY 306 MLTCSGVFKVWNPIDANTTEVWTYAIV-----EKDM-----PEDLKRRLADS 347  
 DB 281 FMTVIYEP---PVDATT-LQHYDIYTNBELTQDQKDLIEWYRNVPRPDL--NLVES 333  
 QY 348 VQRTVGPAGF 357  
 DB 334 VQRLKSRGY 343

## RESULT 9

US-09-252-991A-19627  
 Sequence 19627, Application US/09252991A  
 Patent No. 6551795  
 GENERAL INFORMATION:  
 APPLICANT: Marc J. Rubenfield et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: 107196.136  
 CURRENT APPLICATION NUMBER: US/09/252,991A  
 CURRENT FILING DATE: 1999-02-18  
 PRIOR APPLICATION NUMBER: US 60/074,788  
 PRIOR FILING DATE: 1998-02-18  
 PRIOR APPLICATION NUMBER: US 60/094,190  
 PRIOR FILING DATE: 1998-07-27  
 NUMBER OF SEQ ID NOS: 33142  
 SEQ ID NO 19627  
 LENGTH: 529  
 TYPE: PRT  
 ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-19627

Query Match  
 Best Local Similarity 9.9%; Score 237.5; DB 4; Length 529;  
 Mismatches 86; Conservative 54; Mismatches 139; Indels 67; Gaps 15;

QY 30 ELKTIAPRWLFLTHSLIPAPGDYVTAAGIDEVIVSRQNDGSIAPFLNVCRRHGRKTLV 89  
 DB 173 ERERLFGRLMIFVGFSSWVRNNOFFTEKIAGVVVPVQRTESG-IRAFNLQCPHR-LSAI 230  
 QY 90 SVEAGNAKGVCSYHGWGFGSGNGLQSPFEKDLGYSLNKKG-GLKKEVARVESPHGFI 148  
 DB 231 QTECTGQRPLVCPYHANSFGAEGQLQGP-NSSLYQFSABERARIGLRKL-HLEVEVGQLL 288  
 QY 149 YGCFDQEARPLMDYLGDAWYLEPMFKHSGGLE-LVGPFGKVIKANKKAPAEFVQDA 206  
 DB 289 FVNLAADPLRQEPDQG--FLETLREVSSHLDTRLIYSCHKV--RYNNWLNMMEN-VKDY 343  
 QY 207 YHVGWTHASS-LRSGESIFSSLAGNAALP-----PEGAGLQMTSK-----YGS 248  
 DB 344 NHVPVHPKTLPLVMTAPVRGLAREAAVPSVLRLLQEGETPELRSLSFPTKAPIQPKS 403  
 QY 249 GNGVLWDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCVTFPNNSMLT 308  
 DB 404 WFDLCEGYGDEH-----AYNNFIYENNVNFC 431  
 QY 309 CSG---VFQVWNPIDANTTE---VWTYAIIVEKMPEDLKRRLADSVQ 349  
 DB 432 VRGEHFLQQDVPAPGETDYHLMMWMTARRKDPKPTDFSAALLTLIR 477

## RESULT 10

US-09-004-393B-4  
 Sequence 4, Application US/09004393B  
 Patent No. 6310271  
 GENERAL INFORMATION:

```

QY 147 FYVCGFQDEAPLMD-----YLGDAANVLEPMFKHS--GGLELVGPPGKVVIKANWKAPAE 200
Db 224 FVLISLDRLEBGGVGVTWGLTSA---BDYKAHAFDPSLQFT-HRSEPFMESNWKIPSD 277
QY 201 NFVGDYHVGMTH 213
Db 280 NYLSDSSYHVPYAH 292

RESULT 12
US-08-810-009-19
; Sequence 19, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSES: BELL, SEITZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-810-009-19

Query Match 7.7%; Score 185; DB 3; Length 35;
Best Local Similarity 94.3%; Pred. No. 6.6e-11;
Matches 33; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVBAGNAKGFCVCSYHGWGFGSGNGE 113
Db 1 NVCHRGKTLVSVBAGNAKGFCVCSYHGWGFGSGNGE 35

RESULT 13
US-08-810-009-20
; Sequence 20, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS

```

; NUMBER OF SEQUENCES: 65  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
 ; STREET: P.O. Drawer 34009  
 ; CITY: Charlotte  
 ; STATE: No. 6211437th Carolina  
 ; COUNTRY: USA  
 ; ZIP: 28234  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/810,009  
 ; FILING DATE: 04-MAR-1997  
 ; CLASSIFICATION: 800  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Spruill, W. Murray  
 ; REGISTRATION NUMBER: 32,943  
 ; REFERENCE/DOCKET NUMBER: 5718-4  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 919-881-3140  
 ; TELEFAX: 919-881-3175  
 ; TELEX: 575102  
 ; INFORMATION FOR SEQ ID NO: 20:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 35 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS:  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; US-08-810-009-20  
 ;  
 ; Query Match 7.2%; Score 174; DB 3; Length 35;  
 ; Best Local Similarity 85.7%; Pred. No. 7.4e-10;  
 ; Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;  
 ;  
 QY 79 NVCHRGKTLVSVAGNAKGVCSYHGWGFGSGN 113  
 Db 1 NVCHRGKTLVSVAGNAKGVCSYHGWGFGSGN 35  
 ;  
 RESULT 14  
 US-08-810-009-21  
 ; Sequence 21, Application US/08810009  
 ; Patent No. 6211437  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Briggs, Steven P.  
 ; APPLICANT: Johal, Gurmukh S.  
 ; APPLICANT: Gray, John  
 ; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING  
 ; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS  
 ; NUMBER OF SEQUENCES: 65  
 ; CORRESPONDENCE ADDRESS:  
 ; ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
 ; STREET: P.O. Drawer 34009  
 ; CITY: Charlotte  
 ; STATE: No. 6211437th Carolina  
 ; COUNTRY: USA  
 ; ZIP: 28234  
 ; COMPUTER READABLE FORM:  
 ; MEDIUM TYPE: Floppy disk  
 ; COMPUTER: IBM PC compatible  
 ; OPERATING SYSTEM: PC-DOS/MS-DOS  
 ; SOFTWARE: PatentIn Release #1.0, Version #1.30  
 ; CURRENT APPLICATION DATA:  
 ; APPLICATION NUMBER: US/08/810,009  
 ; FILING DATE: 04-MAR-1997  
 ; CLASSIFICATION: 800  
 ; ATTORNEY/AGENT INFORMATION:  
 ; NAME: Spruill, W. Murray  
 ; REGISTRATION NUMBER: 32,943

; REFERENCE/DOCKET NUMBER: 5718-4  
 ; TELECOMMUNICATION INFORMATION:  
 ; TELEPHONE: 919-881-3140  
 ; TELEFAX: 919-881-3175  
 ; TELEX: 575102  
 ; INFORMATION FOR SEQ ID NO: 21:  
 ; SEQUENCE CHARACTERISTICS:  
 ; LENGTH: 35 amino acids  
 ; TYPE: amino acid  
 ; STRANDEDNESS:  
 ; TOPOLOGY: linear  
 ; MOLECULE TYPE: protein  
 ; US-08-810-009-21

Query Match 7.0%; Score 168; DB 3; Length 35;  
 Best Local Similarity 80.0%; Pred. No. 2.8e-09;  
 Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVAGNAKGVCSYHGWGFGSGN 113  
 Db 1 NVCHRGKTLVSVAGNAKGVCSYHGWGFGSGN 35

RESULT 15  
 US-09-252-991A-27100  
 ; Sequence 27100, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 27100  
 ; LENGTH: 629  
 ; TYPE: PRY  
 ; ORGANISM: Pseudomonas aeruginosa  
 ; US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;  
 Best Local Similarity 24.3%; Pred. No. 5.1e-05;  
 Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NKKILVSEGLSQKHLI--HGDEELFQHELKTI FARN--WLFTHDSLIPAGDYVTARM 59  
 Db 247 SNRLEFVQKRLTWKSLANHWIQLQKQREDPTMPKNAWYVACTPDELAKGP---LGRRI 303  
 QY 60 GIDEVIVSRQNDGSI RALFVNCRHK--TLVSVAGNAKGVCSYHGWGFGSGNCELOSV 117  
 Db 304 CDEFMVYTRGEDGRVAALDFCFHRGAPLSLGSFEDG---VLVCGYHGLAMGEDGRTARM 360  
 QY 118 PFEXDLYGESLNKCKGLKKEVAR--VESFHGPY---GCFQDEAPPLMDYLGDAAWYLEP 172  
 Db 361 P-----GQVRGFPFCIRRFVQERHGFVWVPGEAEQADALIPRL---EWAESP 407  
 QY 173 MPKHSGLGLVGPPOKVVKANWKAPEAFVGDYHVGWTHASSL-----R 218  
 Db 408 DWAYGGGL-----YHHCYRLMIDNLM-DLTHETVHASSIGQKEIDEAAPTTRVE 458  
 QY 219 SCESIFSSLAGNALPP-----EGAGL 240  
 Db 459 GDEVITSRHMQNVMAFPFWRMALRGNGL 486

Search completed: December 9, 2003, 15:45:52  
 Job time : 13 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-32

Perfect score: 2410

Sequence: 1 MNVNNKILVSEGLSQKHLI.....AEPEHASHTWHTLTKTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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- 1: /cgn2\_6/ptodata/1/iaa/5A COMB.pap.\*
  - 2: /cgn2\_6/ptodata/1/iaa/5B COMB.pap.\*
  - 3: /cgn2\_6/ptodata/1/iaa/6A COMB.pap.\*
  - 4: /cgn2\_6/ptodata/1/iaa/6B COMB.pap.\*
  - 5: /cgn2\_6/ptodata/1/iaa/PTUS COMB.pap.\*
  - 6: /cgn2\_6/ptodata/1/iaa/backfiles1.pap.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	407.5	16.9	496	4	US-09-328-352-6452
2	406.5	16.9	483	4	US-09-352-991A-31367
3	388	16.1	443	4	US-09-328-352-7248
4	384.5	16.0	466	4	US-09-328-352-31385
5	359	14.9	471	4	US-09-328-352-7591
6	341.5	14.2	425	4	US-09-328-352-25088
7	291	12.1	449	4	US-09-328-352-17164
8	276.5	11.5	375	4	US-09-328-352-4700
9	237.5	9.9	529	4	US-09-328-352-19627
10	224	9.3	446	4	US-09-328-352-19627
11	223	9.3	439	4	US-09-328-352-19627
12	185	7.7	35	3	US-09-004-393B-4
13	174	7.2	35	3	US-08-810-009-19
14	168	7.0	35	3	US-08-810-009-20
15	143.5	6.0	629	4	US-09-328-352-21
16	128	5.3	332	4	US-09-328-352-27100
17	118.5	4.9	354	4	US-08-376-063E-4
18	113.5	4.7	379	3	US-09-028-934-36
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-14
21	108	4.5	35	3	US-08-810-009-13
22	108	4.5	35	3	US-08-810-009-15
23	108	4.5	622	4	US-09-311-626B-4
24	106	4.4	35	3	US-08-810-009-9
25	106	4.4	364	4	US-09-328-352-4956
26	105.5	4.4	432	3	US-08-809-326A-16
27	105.5	4.4	432	4	US-09-689-914A-16

28	105.5	4.4	432	4	US-09-689-913A-16	Sequence 16, Appl
29	105.5	4.4	432	4	US-09-689-916A-16	Sequence 16, Appl
30	105.5	4.4	649	3	US-08-809-326A-15	Sequence 15, Appl
31	105.5	4.4	649	4	US-09-689-914A-15	Sequence 15, Appl
32	105.5	4.4	649	4	US-09-689-913A-15	Sequence 15, Appl
33	105.5	4.4	649	4	US-09-689-916A-15	Sequence 15, Appl
34	104	4.3	35	3	US-08-810-009-18	Sequence 18, Appl
35	103	4.3	35	3	US-08-810-009-11	Sequence 11, Appl
36	102	4.2	35	3	US-08-810-009-8	Sequence 8, Appl
37	102	4.2	35	3	US-08-810-009-10	Sequence 10, Appl
38	101	4.2	17	3	US-08-810-009-44	Sequence 44, Appl
39	101	4.2	17	3	US-08-810-009-45	Sequence 45, Appl
40	100.5	4.2	363	4	US-09-328-352-5961	Sequence 5961, Ap
41	100	4.1	35	3	US-08-810-009-17	Sequence 17, Appl
42	100	4.1	1132	4	US-09-198-452A-466	Sequence 466, App
43	99.5	4.1	256	4	US-09-323-932A-57	Sequence 57, Appl
44	99	4.1	560	3	US-08-814-052-6	Sequence 6, Appl
45	99	4.1	560	3	US-08-812-829-6	Sequence 6, Appl

ALIGNMENTS

RESULT 1  
US-09-328-352-6452  
; Sequence 6452, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; FILE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; CURRENT FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 6452  
; LENGTH: 496  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-6452

Query Match	16.9%	Score	407.5	DB	4	Length	496
Best Local Similarity	31.3%	Pred. No.	3.8e-31				
Matches	105	Conservative	59	Mismatches	146	Indels	25
Gaps	13						
QY	23	DEELFQHEKTYIFARNWLFTHDSLIIPAGDIYVIANOGIDEVTVSRQNDGSIAPLNVCR	82				
Db	73	DEALFDLEMYTFEGNMYVLAHESQIPNNNDYTTTIGRPIIIARNRNGELNMINACS	132				
QY	83	HRGKTLVSVBAGNAKGFVCSYHGWGFGNGELQSVPEKDL-YGESLNKK-CLGKEVAR	140				
Db	133	HRGAQLCRYKGNKATYTCPEHGTWNNSGKLLKVDTPDAGYSDCFNQDQSHDLKKVAR	192				
QY	141	VESFHGTGYGCFDQAPPLMDYLGDAWYLFBNFKHS-GGHELVGPPGVVVKANWKAPA	199				
Db	193	FESYKGFPLGSLNPDVPSLEELGETTKIIDIMVDQSHGLVLRGSGSTTYVEGNKILTA	252				
QY	200	ENFVGDAYHVG---WTHASSLRSGESIFSSLAGNAALPPEGA-GLQMTSKYG--SGMVL	253				
Db	253	EN-GADGYHVSVAHWNVAATQHRKE--TQADNIRAMSAGSWGQGGSGYGFENGHMLL	309				
QY	254	WDGYSVGHSAADLVPELMFAGGAKQERLNKEIGDVRAR--IVRSHLNCTVPPNNSMTCSG	311				
Db	310	WTQANPEDRNFP-----KADEYTEKYGAMSKWMIERSR-NLCLYENVTIMDQFG	360				
QY	312	-VFKVNPIDANTTEVMTYAIWEK-DMPEDLKRRL	344				
Db	361	SOIRVRLPSVNRTEVTYICAPKEAPEAPARRI	395				

RESULT 2  
US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A

Patent No. 6551795  
 GENERAL INFORMATION:  
 APPLICANT: Marc J. Rubenfield et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: 107196.136  
 CURRENT APPLICATION NUMBER: US/09/252,991A  
 PRIOR FILING DATE: 1999-02-18  
 PRIOR FILING DATE: 1999-02-18  
 PRIOR FILING DATE: 1998-02-18  
 PRIOR FILING DATE: 1998-07-27  
 NUMBER OF SEQ ID NOS: 33142  
 SEQ ID NO 31367  
 LENGTH: 463  
 TYPE: PRT  
 ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-31367

Query Match 16.9%; Score 406.5; DB 4; Length 463;  
 Best Local Similarity 29.08; Pred. No. 4.2e-31;  
 Matches 110; Conservative 69; Mismatches 149; Indels 51; Gaps 17;

QY 23 DEELFOHELKTIIFARNWLFTHDSLIAPAGDYVTAKMGIDDEVIVSRQNDGSIRAFNLVCR 82  
 DB 38 DPLFLELMKHIFEGNVVLAHESQVAGVNDYLTQTIGRQSIIVARNRQQLNAFINACS 97  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGSGNGELQSV--PEKDIYGSLLKCLG---LKE 137  
 DB 98 HRGMLCRHSGNRSSSTCFHGTWNNKGLKLVDPABAG--YPOGFN--CEGSHDLTR 154  
 QY 138 VARVSPHGYFCDFQDQAPPLMDYLGDAAWYLEPMPKHS--GGLELVGPPGVVVKANKK 196  
 DB 155 VARFESYRGFLGSLNPDVFLAHLGESAIIIMIVDQSPGLEVLVIRGSSSVYVGNWK 214  
 QY 197 APAENFVGDAYHYG---WTHASS-----LRSGESIFSSLAGNAALPPEGAGLQ 241  
 DB 215 LTAEN--GADGYHVSVMYNTAATQSQORQDAADPLRT-----MSAAGWAR---QGGGFY 265  
 QY 242 MTSKYGSGMGLMDYGVSGVHSDLVPE--LMAFGAKQERLNKEIGDVR--IYRSHLNT 299  
 DB 266 ---SPEHGHMLLSRWAN-----PEDRPAF--ERRAELARDFGEARADMMIENSRLC 313  
 QY 300 VFPNNML--TCGKVFVKNPDIANTTEVMTYAIVEKDPEDLKRLLADSVQRTGGPAGFW 358  
 DB 314 LYENVILMDQFSQIRIARPLSDVTEITTYCIAPKGSARARIRQYEDFNVSGNA 373  
 QY 359 ESDNDNMETASQNGKKYQ 377  
 DB 374 TPDDLBEFRSCQGG---YQ 389

RESULT 3  
 US-09-328-352-7248  
 Sequence 7248, Application US/09328352  
 Patent No. 6562958  
 GENERAL INFORMATION:  
 APPLICANT: Gary L. Breton et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: GTC98-03PA  
 CURRENT APPLICATION NUMBER: US/09/328,352  
 PRIOR FILING DATE: 1999-06-04  
 NUMBER OF SEQ ID NOS: 8252  
 SEQ ID NO 7248  
 LENGTH: 445  
 TYPE: PRT  
 ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7248

Query Match 16.1%; Score 388; DB 4; Length 445;  
 Best Local Similarity 28.1%; Pred. No. 2.5e-29;  
 Matches 124; Conservative 66; Mismatches 164; Indels 89; Gaps 21;

QY 20 IHGDELFQHELKTIIFARNWLFTHDSLIAPAGDYVTAKMGIDDEVIVSRQNDGSIRAFNL 79  
 DB 47 LYKDERIFDEEMEKIFYSTWVVAHASEIPEGSSYKTTINIGKQPVVVVDRKKKVVHLLN 106  
 QY 80 VCRHRGKTLVSVEAGNAKGFVCSYHGWGSGNGELQSVPEKDIYGSLLKCLGKEVA 139  
 DB 107 RCHRAAATVCEHKKKKTNSFVCPHGWSYALDGSLLRGVP--SPESYGDCCLDKSELPLVSL- 164  
 QY 140 RVESPHGYFCDFQDQAPPLMDYLGDAAWYLEPMPKHS--GGLELVGPPGVVVKANKK 192  
 DB 165 RVEEYNGMIFASFKEDIQLEEFGLPAKWIDLFMKQAGYPIKVLGHRFRFPFG----- 219  
 QY 193 ANWKAPAENFVGDAYHYGTHASSLRS-----GESIFSSLAGNAALPPEGAGLQMTSKGS 248  
 DB 220 -NWKIQLN--TTDAYHPLVHKSFSSVDEKTEELFN-----PEN 257  
 QY 249 GMGLMDYGVSGVHSDLVPELMAFGAKQER--LNKEIGDVR-----ARIYR- 293  
 DB 258 QPGFVEDLGNHGSVMWMIPELVLDLEEDLMERPIQERFEDLAQALNDSGHEELEVRIVRA 317  
 QY 294 ---SHLNTCTVFPNNSMLTCS--GVFKVWNPIDANTTEVMTYAIVEK---MPEDLKRRLA 345  
 DB 318 VGGSGFNLMFPN---IACSMAFFRVLQPISTVAETEI--HHSVITMDGGPQIANOVYRLRLH 373  
 QY 346 DSVQRTGGPAGFWBSDDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVVG- 404  
 DB 374 EHFQ---GFFGFGTDDSEAWERV--OHGAN--AGNDLMTMLNRGL-----PGEVKT 418  
 QY 405 ---KSAI--GETSVRGFYRAYQ 421  
 DB 419 EDGLKSDVSATGWEAAAYQOKK 440

RESULT 4  
 US-09-252-991A-31385  
 Sequence 31385, Application US/09252991A  
 Patent No. 6551795  
 GENERAL INFORMATION:  
 APPLICANT: Marc J. Rubenfield et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: 107196.136  
 CURRENT APPLICATION NUMBER: US/09/252,991A  
 PRIOR FILING DATE: 1999-02-18  
 PRIOR FILING DATE: 1998-02-18  
 PRIOR FILING DATE: 1998-07-27  
 NUMBER OF SEQ ID NOS: 33142  
 SEQ ID NO 31385  
 LENGTH: 466  
 TYPE: PRT  
 ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-31385

Query Match 15.0%; Score 384.5; DB 4; Length 466;  
 Best Local Similarity 27.3%; Pred. No. 6e-29;  
 Matches 122; Conservative 76; Mismatches 176; Indels 73; Gaps 19;

QY 23 DEELFOHELKTIIFARNWLFTHDSLIAPAGDYVTAKMGIDDEVIVSRQNDGSIRAFNLVCR 82  
 DB 39 EPFLFDLEMLIFEKNIYACHESLARPHDFVTLRAGRQPLIVTRDGNQGLHLVDACQ 98  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGSGNGELQSV--PFEKDIYGSLLKCLGKEVAR 140  
 DB 99 HRGATLVKVGKNSQSTETCPHAWCYKNDGRLVKVAPE---YPEGDKATRGK-AR 154  
 QY 141 VESPHGYFCDFQDQEA--PPLMDYLGDAAWYLEPMPKHS--SGGLELVGPPGVVVKANKK 197  
 DB 155 IQSYRGFVFLVSLDVAGEDDLVDFLGDARVFLDMLVAQSPSGEVLFGTSTTYTEGNWKL 214  
 QY 198 PAENFVGDAYHYGTHASSLRSIFSSLAGNAALPPEGAGLQMT---SKYSGMGLV- 253

Db 215 QNENGL-DYHVSIVHYV-----ATVHQROQVBAERGVAATLDYSKLGAGDAATD 266  
 QY 254 --WDGYSGVHS-----ADLVPELMAFGGAKOERLNKEIGDVRIYRSHL 296  
 Db 267 DGMPSFANGSHVLPSEMPNPAVRPGYASVMPFLVA-----EYQARAEWMHRL 315  
 QY 297 -NCTVFPNNSML--TCSGVFKVWNPIDANTTEVWTYAI-VEKMPEDLKRRLAD-----SV 348  
 Db 316 RNLNLSPLFVIDQISSQLRIVRPLAWNRTEIVSQCIQVKGESADRENRIQEPDFNV 375  
 QY 349 QRTGCPAGFWESDDNNMETASQNGKQYQSDSDLLSNLGFGEVDYGVAVPGVVGKSAI 408  
 Db 376 SCWGP-----DDAVEFREARQGFQAELEWSDI--SRHGKWLGAATNSQALGAPL 427  
 QY 409 ---GTSYRGFRAYQAHVSSNNWAF 432  
 Db 428 LTGTEITHEGLVYNQAH-----WRRF 449

## RESULT 5

US-09-328-352-7581

; Sequence 7581, Application US/09328352

; Patent No. 6562958

; GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER

; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS

; FILE REFERENCE: GTC99-03PA

; CURRENT APPLICATION NUMBER: US/09/328,352

; CURRENT FILING DATE: 1999-06-04

; NUMBER OF SEQ ID NOS: 8252

; SEQ ID NO 7581

; LENGTH: 471

; TYPE: PRT

; ORGANISM: Acinetobacter baumannii

US-09-328-352-7581

Query Match 14.9%; Score 359; DB 4; Length 471;  
 Best Local Similarity 25.3%; Pred. No. 1.9e-26;  
 Matches 112; Conservative 68; Mismatches 184; Indels 78; Gaps 14;  
 QY 23 DEELQHELTIFARNWFLTHDSLIPAPGDYVTAQMGIDVIVSRQNGDSIRAFNVCR 82  
 Db 35 RPELDELEMERIEFKVWYACHESIPNNHDFLTQIGRQPIIVSRDQKGLHAWNACE 94  
 QY 83 HRGKTLVSVEAGNAKGFVCSVHGWSGNGELQSVPEKDYGSLSNKKCLGLAKEVARVE 142  
 Db 95 HGAATLTVAKNQSTPTCPFHAWCYKSDGRUVKVPSE-YCFDFKSSKGLQ-QRIA 152  
 QY 143 SPHGTYGCFDOEA-PPLMDYLGDAWYLEPMPKHS--GGLELVGPPGKVVIKANNKAPA 199  
 Db 153 SYRGFVFLDQATDSLEDFLDGAKFLDLMVNGSPTEGLEVLQKSSYTFAGNWKLN 212  
 QY 200 ENFVGDAHVGVTH--ASSLSGESIFSSLAGNALPPEGAGLQMT--SKYSGMGVLW 254  
 Db 213 ENGL-DGYHVSIVHYVSTVHQROQVNAS-----KGAEFLTLDYSKLGAGDSETD 262  
 QY 255 DGYSGVHSADLV-----PELMAFGGAKOERLNKEIGDVRIYRSHL-NCTVFPNNSM 306  
 Db 263 DGMPSFANGSHVLPSEMPNPAVRPGYASVMPFLVA-----EYQARAEWMHRLNLYPSLFF 322  
 QY 307 L-TCSGVFKVWNPIDANTTEVWTYAI-VEKMPEDLKRRLADSVQRTGGPAGFWESDDNDN 365  
 Db 323 MDQISSQLRIVRPAWNNTEVISCIGVK-----G 352  
 QY 366 METASQNGKQYQSDSDLLSNLGFGEVDYGVAVPGVVGKSAIGTSYRGFRAYQAHSV 425  
 Db 353 ESTEARNRIQEPDFNVSGIGTDDLL-----VEFREQKGFQARL- 394  
 QY 426 SNNWAFEHASSTWTELTKTT 447  
 Db 395 -ERWSDISRGCQSWEYGAATKNS 415

## RESULT 6

US-09-252-991A-25088

; Sequence 25088, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

; FILE REFERENCE: 107196.136

; CURRENT APPLICATION NUMBER: US/09/252,991A

; CURRENT FILING DATE: 1999-02-18

; PRIOR APPLICATION NUMBER: US 60/074,788

; PRIOR FILING DATE: 1998-02-18

; PRIOR APPLICATION NUMBER: US 60/094,190

; PRIOR FILING DATE: 1998-07-27

; NUMBER OF SEQ ID NOS: 33142

; SEQ ID NO 25088

; LENGTH: 425

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-25088

Query Match 14.2%; Score 341.5; DB 4; Length 425;  
 Best Local Similarity 27.4%; Pred. No. 8.2e-25;  
 Matches 114; Conservative 71; Mismatches 178; Indels 53; Gaps 15;  
 QY 25 ELFOHELTITFARNWFLTHDSLIPAPGDYVTAQMGIDVIVSRQNGDSIRAFNVCRHR 84  
 Db 25 ELMRRELHIFDDSWLYAAHLSELREPGDFITRDVGGRNLIQRRADGEPAYILNACARH 84  
 QY 85 GRTLVSVRAGNAKGFVCSVHGWSGNGELQSVPEKDYGSLSNKKCLGLKEVARVES- 143  
 Db 85 GAKVCAERQNSQRTFCYHGWYDHSGLIGLP-DKAAVQHA--GQCPPELSLTVKHA 141  
 QY 144 -FHGYTCFDOEAPPLMDYLGDAWYLEPMPKHS--GGLELVGPPGKVVIKANNKAPAEN 201  
 Db 142 VYRNFLFTHYAAQPSLETYLQAKNDYLDLCQSEAELEIIPGGFHSIKANNKLLAEN 201  
 QY 202 FYGDAHVGVTH--ASSLSGESIFSSLAGNALPPEGAGLQMTSKYSGMGVLWDGYSOVH 261  
 Db 202 GY-DAYHLPFAHRYLEYLNTL-----GTPESHKRGHGR-EALGNGHALII 246  
 QY 262 S-----ADLVPE-LMAFGGAKOERLNKEIGDVRIYRSHLNTCTVFPN--N 304  
 Db 247 SGPPSTGRPIAYWSPLFEALPKPSIAAKFERLVERFGQARAEDIAHTNKSLEIFENLVIN 306  
 QY 305 SMLTCSGVFKVWNPIDANTTEVWTYAI-VEKMPEDLKRRLADSVQRTGGPAGFWESDDND 364  
 Db 307 DILGLN--IRSFPTAADESVTVMGAGFADREERAARINGLISFTFGCGGTGTPDVE 364  
 QY 365 NMETASQNGKQYQSDSDLLSNLGFGEVDYGVAVPGVVGKSAIGTSYRGFRAY 420  
 Db 365 ILLESCQ---RAYAH-----RALGYSDFSRG-----MGPAIRRHVDEQNRGFWEN 407

## RESULT 7

US-09-252-991A-17164

; Sequence 17164, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

; FILE REFERENCE: 107196.136

; CURRENT APPLICATION NUMBER: US/09/252,991A

; CURRENT FILING DATE: 1999-02-18

; PRIOR APPLICATION NUMBER: US 60/074,788

; PRIOR FILING DATE: 1998-02-18

; PRIOR APPLICATION NUMBER: US 60/094,190

; PRIOR FILING DATE: 1998-07-27

; NUMBER OF SEQ ID NOS: 33142



Db 88 NVCPRGHGHELLIS-GSGKAKNVITCPYHANTFKLDGSLALARNCDHVESFDKE-----NS 140

## RESULT 10

**RESULT 10**

```

US-09-004-393B-4
; Sequence 4, Application US/09004393B
; Patent No. 6310271
; GENERAL INFORMATION:
; APPLICANT: Hanson D., Andrew
; APPLICANT: Rathinasabapathi, Bala
; APPLICANT: Burnet, Michael
; TITLE OF INVENTION: Polynucleotides Encoding Choline Monooxygenase and
; TITLE OF INVENTION: Plants Transformed Therewith
; FILE REFERENCE: UF-162
; CURRENT APPLICATION NUMBER: US/09/004,393B
; CURRENT FILING DATE: 1998-01-08
; PRIOR APPLICATION NUMBER: 60/035,147
; PRIOR FILING DATE: 1997-01-08
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 4
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Beta vulgaris
US-09-004-393B-4

Query Match          9.3%; Score 224; DB 4; Length 446;
Best Local Similarity 27.4%; Pred. No. 2.6e-13;
Matches 58; Conservative 37; Mismatches 97; Indels 20; Gaps 6;

Qy 11 ESSLQKHLIHGDEELFQHEIKTIFARNWLFTHDSLIPAGDYVTAKMGIDIVISRON 70
Db 99 EDALTPSTWYTPAFYSHLELRFYKQWQVAGSEQVKEKNQYFTQSLGNVEYLSRDG 158
Qy 71 DGSIRAPLVNCRHGKTLVSVENAGKFCVCSYHGNGFSGNGELQSVPFKOLYGSLSNK 130
Db 159 QGELHAFHNVCTHRA-SILACGSGKSCFCVPHGWYGLDGLAKA--SKATETQNDP 215
Qy 131 KCLGLKEVARVESPHGIYCFQOEAPLMD-----YLGDA-----AWYLEPMFKHSGLE 181
Db 216 KELGLAFL-KVAEMGPFILSLDRSLDANADVGTETWIGKSAEDVKAHAFDPLKPTRSE 274
Qy 182 LVGPPGKVIKANKKAPAEVFGDAYHVGWTH 213
Db 275 P-----PMECNWKFCDNVLDSHYHVPYAH 299

RESULT 11
US-09-004-393B-2
; Sequence 2, Application US/09004393B
; Patent No. 6310271
; GENERAL INFORMATION:
; APPLICANT: Hanson D., Andrew
; APPLICANT: Rathinasabapathi, Bala
; APPLICANT: Burnet, Michael
; TITLE OF INVENTION: Polynucleotides Encoding Choline Monooxygenase and
; TITLE OF INVENTION: Plants Transformed Therewith
; FILE REFERENCE: UF-162
; CURRENT APPLICATION NUMBER: US/09/004,393B
; CURRENT FILING DATE: 1998-01-08
; PRIOR APPLICATION NUMBER: 60/035,147
; PRIOR FILING DATE: 1997-01-08
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 2
; LENGTH: 439
; TYPE: PRT
; ORGANISM: Spinacia oleracea
US-09-004-393B-2

Query Match          9.3%; Score 223; DB 4; Length 439;
Best Local Similarity 30.1%; Pred. No. 3.2e-13;
Matches 58; Conservative 38; Mismatches 83; Indels 14; Gaps 7;

Qy 27 FQHEIKTIFARNWLFTHDSLIPAGDYVTAKMGIDIVISRONDSIRAPLVNCRHGK 86
Db 108 ISHELEIRIFYKQWQVAGISQIKPEPNQYFTQSLGNVEYLSRDGEGKGFHFNVCTHRA- 166

US-09-004-393B-5
; Sequence 5, Application US/09004393B
; Patent No. 6310271
; GENERAL INFORMATION:
; APPLICANT: Hanson D., Andrew
; APPLICANT: Rathinasabapathi, Bala
; APPLICANT: Burnet, Michael
; TITLE OF INVENTION: Polynucleotides Encoding Choline Monooxygenase and
; TITLE OF INVENTION: Plants Transformed Therewith
; FILE REFERENCE: UF-162
; CURRENT APPLICATION NUMBER: US/09/004,393B
; CURRENT FILING DATE: 1998-01-08
; PRIOR APPLICATION NUMBER: 60/035,147
; PRIOR FILING DATE: 1997-01-08
; NUMBER OF SEQ ID NOS: 6
; SOFTWARE: Patent in Ver. 2.0
; SEQ ID NO 5
; LENGTH: 446
; TYPE: PRT
; ORGANISM: Beta vulgaris
US-09-004-393B-5

Query Match          9.3%; Score 224; DB 4; Length 446;
Best Local Similarity 27.4%; Pred. No. 2.6e-13;
Matches 58; Conservative 37; Mismatches 97; Indels 20; Gaps 6;

Qy 11 ESSLQKHLIHGDEELFQHEIKTIFARNWLFTHDSLIPAGDYVTAKMGIDIVISRON 70
Db 99 EDALTPSTWYTPAFYSHLELRFYKQWQVAGSEQVKEKNQYFTQSLGNVEYLSRDG 158
Qy 71 DGSIRAPLVNCRHGKTLVSVENAGKFCVCSYHGNGFSGNGELQSVPFKOLYGSLSNK 130
Db 159 QGELHAFHNVCTHRA-SILACGSGKSCFCVPHGWYGLDGLAKA--SKATETQNDP 215
Qy 131 KCLGLKEVARVESPHGIYCFQOEAPLMD-----YLGDA-----AWYLEPMFKHSGLE 181
Db 216 KELGLAFL-KVAEMGPFILSLDRSLDANADVGTETWIGKSAEDVKAHAFDPLKPTRSE 274
Qy 182 LVGPPGKVIKANKKAPAEVFGDAYHVGWTH 213
Db 275 P-----PMECNWKFCDNVLDSHYHVPYAH 299

RESULT 12
US-08-810-009-19
; Sequence 19, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Jobal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSER: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: IBM PC compatible
; SOFTWARE: Patent In Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
US-08-810-009-19

Query Match          7.7%; Score 185; DB 3; Length 35;
Best Local Similarity 94.3%; Pred. No. 3.3e-11;
Matches 33; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

Qy 79 NVCRHGRKTLVSVENAGKFCVCSYHGNGFSGNGR 113
Db 1 NVCRHGRKTLVSVENAGKFCVCSYHGNGFSGNGK 35

RESULT 13
US-08-810-009-20
; Sequence 20, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.

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; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 20:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-20

Query Match 7.2%; Score 174; DB 3; Length 35;
Best Local Similarity 85.7%; Pred. No. 3.9e-10;
Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 79 NVCRHGRKTLVSEAGNAKGFVCSYHGMGFGSGNCE 113
Db 1 NVCRHGRKTLVSEAGNAKGFVCSYHGMGFGSGNCK 35

RESULT 14
US-08-810-009-21
; Sequence 21, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997

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; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 21:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-21

Query Match 7.0%; Score 168; DB 3; Length 35;
Best Local Similarity 80.0%; Pred. No. 1.5e-09;
Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCRHGRKTLVSEAGNAKGFVCSYHGMGFGSGNCE 113
Db 1 NVCRHGRKTLVSEAGNAKGFVCSYHGMGFGSGNCK 35

RESULT 15
US-09-252-991A-27100
; Sequence 27100, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/094,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 27100
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
; US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;
Best Local Similarity 24.3%; Pred. No. 3.2e-05;
Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NKKLVSEGLSQKHLI--HGDELFQHLKTFARN--KLFTHDSLIPAGDYVTAKM 59
Db 247 SNRFFVQKRLTWKSLANHWIQLQKQREDPTFPKNAWYVACTPDELAKP---LGRRI 303

QY 60 GIDDEVIVSRQDGSIRAFNVCRHRGK--TLVSVSEAGNAKGFVCSYHGMGFGSGNCELOSV 117
Db 304 CDEPWVYRGEDGRVALEDFCHRGAPLSLGFVEDG---VLVCGYHGLAWGEDGRTAM 360

QY 118 PFEKDLVGSINKKCLGLKEVAR--VESFHGPTY---GCFDQAPPMYDGLGDAWYLEP 172
Db 361 P-----GQVRGFPFCIRFPFQVRHGFGVWVWFGABEQADAALIPRL---EWAESP 407

QY 173 MFKHSGGLELVGPPGVKVIKANWKAENPVGDAYVGVWTHASSL-----R 218
Db 408 DWAYGGGL-----YHHCYRLIMIDNLM-DLTHETVYVHASSIGQKEIDEAAPTTRVE 458

QY 219 SGESIFSSLAGNAALPP-----EGAGL 240
Db 459 GDEVITSRHMVQNWMAFPFWEMALRGNGL 486

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Wed Dec 10 08:12:34 2003

us-09-843-250-32.ra1

Page 7

Search completed: December 9, 2003, 15:45:53  
Job time : 13 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)  
3771.269 Million cell updates/sec

Title: US-09-843-250-32

Perfect score: 2410

Sequence: 1 MNNKILVSSGLSQKHLI.....AEFEHASWTWELTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

Database :

Published Applications AA:\*  
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2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep:\*  
3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep:\*  
4: /cgn2\_6/ptodata/1/pubpaa/US06\_PUBCOMB.pep:\*  
5: /cgn2\_6/ptodata/1/pubpaa/US07\_NEW\_PUB.pep:\*  
6: /cgn2\_6/ptodata/1/pubpaa/PCTUS\_PUBCOMB.pep:\*  
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9: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep:\*  
10: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep:\*  
11: /cgn2\_6/ptodata/1/pubpaa/US09\_PUBCOMB.pep:\*  
12: /cgn2\_6/ptodata/1/pubpaa/US09\_NEW\_PUB.pep:\*  
13: /cgn2\_6/ptodata/1/pubpaa/US10\_PUBCOMB.pep:\*  
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17: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep:\*  
18: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	2410	100.0	449	11	US-09-843-250-32 Sequence 32, Appl
2	2404	99.8	449	11	US-09-843-250-33 Sequence 33, Appl
3	2402	99.7	449	11	US-09-843-250-34 Sequence 34, Appl
4	2402	99.7	449	11	US-09-843-250-58 Sequence 58, Appl
5	2401	99.6	449	11	US-09-843-250-2 Sequence 2, Appl
6	2401	99.6	449	11	US-09-843-250-14 Sequence 14, Appl
7	2401	99.6	449	11	US-09-843-250-15 Sequence 15, Appl
8	2401	99.6	449	11	US-09-843-250-26 Sequence 26, Appl
9	2401	99.6	449	11	US-09-843-250-59 Sequence 59, Appl
10	2400	99.6	449	11	US-09-843-250-35 Sequence 35, Appl
11	2400	99.6	449	11	US-09-843-250-36 Sequence 36, Appl
12	2396	99.4	449	11	US-09-843-250-16 Sequence 16, Appl
13	2391	99.2	449	11	US-09-843-250-17 Sequence 17, Appl
14	2343	97.2	449	11	US-09-843-250-18 Sequence 18, Appl
15	2315	96.1	449	11	US-09-843-250-19 Sequence 19, Appl

16	2289	95.0	449	11	US-09-843-250-20	Sequence 20, Appl
17	2216	92.0	449	11	US-09-843-250-21	Sequence 21, Appl
18	2186	90.7	447	11	US-09-843-250-22	Sequence 22, Appl
19	2049	85.0	447	11	US-09-843-250-23	Sequence 23, Appl
20	1965.5	81.6	451	11	US-09-843-250-24	Sequence 24, Appl
21	734	30.5	453	9	US-09-815-242-10253	Sequence 10253, A
22	377.5	15.7	385	9	US-09-815-242-11692	Sequence 11692, A
23	376	15.6	490	10	US-09-738-626-6140	Sequence 6140, Ap
24	333.5	13.8	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	248	10.3	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
38	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
44	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl
45	104.5	4.3	951	10	US-09-924-097-15	Sequence 15, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralese, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PNT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match	100.0%;	Score	2410;	DB 11;	Length	449;	
Best Local Similarity	100.0%;	Pred. No.	4.5e-227;	Mismatches	0;	Gaps	0;
Matches	449;	Conservative	0;	Mismatches	0;	Indels	0;
QY	1	MNNKILVSSGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLTPAGDYVTKMG	60				
Db	1	MNNKILVSSGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLTPAGDYVTKMG	60				
QY	61	IDEVISQNDGSIKAFINVCVRHKGKTLVSVEAGNAKGFVCSYHGWFGSGNGELQSPFFE	120				
Db	61	IDEVISQNDGSIKAFINVCVRHKGKTLVSVEAGNAKGFVCSYHGWFGSGNGELQSPFFE	120				

QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
QY 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVGKSAIGETSIRGFYRAY 420  
DB 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVGKSAIGETSIRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 2

US-09-843-250-33  
; Sequence 33, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 33  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.  
US-09-843-250-33

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLHGDEELFQHELKTI FARNWLFTHDSLIPAGDYVTAKMG 60  
DB 1 MNYNNKILVSESGLSQKHLHGDEELFQHELKTI FARNWLFTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSI RAEFLNVCRRHGKTLVSVEAGNAKGFVCSVHGFGSGNGELQSVPE 120  
DB 61 IDEVIVSRQNDGSI RAEFLNVCRRHGKTLVSVEAGNAKGFVCSVHGFGSGNGELQSVPE 120  
QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
QY 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVGKSAIGETSIRGFYRAY 420  
DB 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVGKSAIGETSIRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 3

US-09-843-250-34  
; Sequence 34, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 34  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.  
US-09-843-250-34

Query Match 99.7%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLHGDEELFQHELKTI FARNWLFTHDSLIPAGDYVTAKMG 60  
DB 1 MNYNNKILVSESGLSQKHLHGDEELFQHELKTI FARNWLFTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSI RAEFLNVCRRHGKTLVSVEAGNAKGFVCSVHGFGSGNGELQSVPE 120  
DB 61 IDEVIVSRQNDGSI RAEFLNVCRRHGKTLVSVEAGNAKGFVCSVHGFGSGNGELQSVPE 120  
QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
DB 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDGDAWYLEPMPKHSGL 180  
QY 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPGKVVVKANWKAPAEFVGDVHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLDGYSVGHASDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEWVTYAI VEKOMPEDLKRRLADSVQRTGPGAGFWS 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEDEVYGDVYGVGKSAIGETSIRGFYRAY 420

Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVGVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 4

US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.

US-09-843-250-58  
Query Match 99.7%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKWG 60  
QY 61 IDEVIVSRQNDGSIKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 120  
Db 61 IDEVIVSRQNDGSIKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 120  
QY 121 KDLYGESLANKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLYGESLANKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVVIKANKKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 240  
Db 181 ELVGPFGKVVIKANKKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 240  
QY 241 QMTSKYSGMGVLMDCYSGVSHSADLVPELMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLMDCYSGVSHSADLVPELMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTGGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTGGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVGVGKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVGVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 5

US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the

US-09-843-250-2  
; Sequence 2, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1

US-09-843-250-2  
Query Match 99.6%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.5e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKWG 60  
QY 61 IDEVIVSRQNDGSIKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 120  
Db 61 IDEVIVSRQNDGSIKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 120  
QY 121 KDLYGESLANKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLYGESLANKKCLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVVIKANKKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 240  
Db 181 ELVGPFGKVVIKANKKAPENFVGDYHVGWTHASSLRSGESIFSSLAGNALPPEGAGL 240  
QY 241 QMTSKYSGMGVLMDCYSGVSHSADLVPELMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLMDCYSGVSHSADLVPELMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTGGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTGGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVGVGKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVGVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 6

US-09-843-250-14  
; Sequence 14, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the





```
QY 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
DB 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
QY 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
DB 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
QY 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDWGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDWGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVKNPDIANTTEVMTYAIVEKOMPEDLKRLADSVQRTGPGAGFWES 360
DB 301 FPNNSMLTCSGVFKVKNPDIANTTEVMTYAIVEKOMPEDLKRLADSVQRTGPGAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNAEFAHSSHTWHTLTCTDR 449
DB 421 QAHVSSNNAEFAHSSHTWHTLTCTDR 449
```

## RESULT 9

```
US-09-843-250-59
; Sequence 59, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 59
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.
US-09-843-250-59
```

```
Query Match 99.6%; Score 2401; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 3.5e-226;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
QY 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
DB 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
QY 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
DB 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
```

```
QY 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDWGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDWGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVKNPDIANTTEVMTYAIVEKOMPEDLKRLADSVQRTGPGAGFWES 360
DB 301 FPNNSMLTCSGVFKVKNPDIANTTEVMTYAIVEKOMPEDLKRLADSVQRTGPGAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNAEFAHSSHTWHTLTCTDR 449
DB 421 QAHVSSNNAEFAHSSHTWHTLTCTDR 449
```

## RESULT 10

```
US-09-843-250-35
; Sequence 35, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 35
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.
US-09-843-250-35
```

```
Query Match 99.6%; Score 2400; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 4.3e-226;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
DB 1 MNYNKKILVSESGLSQKHLIHGDEELFOHELKTIIPARNWFLTHDSLIPAPGDIYVYAKMG 60
QY 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
DB 61 IDEVIVSRQNDGSIIRAFVLCVHRGKTLVSVVAGNAGKGFVCSYHVGWFGSGNELQSVVPE 120
QY 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLVGSINLKKCLGLKEVARVSEFHGFIYGCDFDQEAAPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGHVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDWGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
```

```
Db 241 QMTSKYSGMGVLDGYSYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
QY 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449
Db 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449

RESULT 11
US-09-843-250-36
; Sequence 36, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Farales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 36
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.
US-09-843-250-36

Query Match 99.6%; Score 2400; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 4.3e-226;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
Db 1 MYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
Db 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
QY 121 KDLYGESLNKKCLGLKEVARVESPHGFIYGCDFQDQAPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKKCLGLKEVARVESPHGFIYGCDFQDQAPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPGKVIKANWKAPEAFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPPGKVIKANWKAPEAFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
Db 241 QMTSKYSGMGVLDGYSYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
QY 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
```

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Db 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449
Db 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449

RESULT 12
US-09-843-250-16
; Sequence 16, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Farales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 16
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.
US-09-843-250-16

Query Match 99.4%; Score 2396; DB 11; Length 449;
Best Local Similarity 99.6%; Pred. No. 1.1e-225;
Matches 447; Conservative 0; Mismatches 2; Indels 0; Gaps 0;

QY 1 MYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
Db 1 MYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
Db 61 IDEVIVSRQNDGSIKRAFLNVCRRHKGTLVSVKAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
QY 121 KDLYGESLNKKCLGLKEVARVESPHGFIYGCDFQDQAPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKKCLGLKEVARVESPHGFIYGCDFQDQAPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPGKVIKANWKAPEAFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPPGKVIKANWKAPEAFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
Db 241 QMTSKYSGMGVLDGYSYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYVKEKMPEDLKRRLADSVQRTGPGAFWES 360
QY 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMTASQNGKKYQSRDSDLLSLNGLFGEDVYDAVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449
Db 421 QAHVSSSNWAEFPHASSTWHTELTKTTDR 449

RESULT 13
US-09-843-250-17
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```

; Sequence 17, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:17
US-09-843-250-17

```

```

Query Match          99.2%; Score 2391; DB 11; Length 449;
Best Local Similarity 99.3%; Pred. No. 3.3e-225;
Matches 446; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGLSQKHLIHGDELFQHELTIFARNWFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNYNKKILVSESGLSQKHLIHGDELFQHELTIFARNWFLTHDSLIPAPGDYVTAKMG 60

QY 61 IDEVIVSRQDGSIRAFNLVNCVHRGKTLVSVNAGNAKGFVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQDGSIRAFNLVNCVHRGKTLVSVNAGNAKGFVCSYHGWGFGSNGELQSVPE 120

QY 121 KOLYGESLNKCLGLKEVARVESPHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180
Db 121 KOLYGESLNKCLGLKEVARVESPHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180

QY 181 ELVGPCKVVIKANWKAFAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPCKVVIKANWKAFAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKOERLNKEIGDVRARIYRSHLNCV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKOERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGFWES 360

QY 361 DDNDNMTASQNGKCYQSRDLSNLGFGEDYVDAYPGVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMTASQNGKCYQSRDLSNLGFGEDYVDAYPGVGVKSAIGETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASSTWHTLTKTIDR 449
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTIDR 449

```

```

RESULT 14
US-09-843-250-18
; Sequence 18, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2

```

```

; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 18
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.
US-09-843-250-18

```

```

Query Match          97.2%; Score 2343; DB 11; Length 449;
Best Local Similarity 96.7%; Pred. No. 1.6e-220;
Matches 434; Conservative 10; Mismatches 5; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGLSQKHLIHGDELFQHELTIFARNWFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNYNKKILVSESGLSQKHLIHGDELFQHELTIFARNWFLTHDSLIPAPGDYVTAKMG 60

QY 61 IDEVIVSRQDGSIRAFNLVNCVHRGKTLVSVNAGNAKGFVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQDGSIRAFNLVNCVHRGKTLVSVNAGNAKGFVCSYHGWGFGSNGELQSVPE 120

QY 121 KOLYGESLNKCLGLKEVARVESPHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180
Db 121 KOLYGESLNKCLGLKEVARVESPHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMPKHSGL 180

QY 181 ELVGPCKVVIKANWKAFAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240
Db 181 ELVGPCKVVIKANWKAFAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKOERLNKEIGDVRARIYRSHLNCV 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGGAKOERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGFWES 360

QY 361 DDNDNMTASQNGKCYQSRDLSNLGFGEDYVDAYPGVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMTASQNGKCYQSRDLSNLGFGEDYVDAYPGVGVKSAIGETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASSTWHTLTKTIDR 449
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTIDR 449

```

```

RESULT 15
US-09-843-250-19
; Sequence 19, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19

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; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: Xaa = any amino acid.
US-09-843-250-19

Query Match          96.1%; Score 2315; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 9.1e-218;
Matches 429; Conservative 12; Mismatches 8; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGISQKHLHGDDELFOHELKTIFARNMLFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNYNKKILVSESGISQKHLHGDDELFOHELKTIFARNMLFLTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIRAFINVCRRHKGKTLVSVBAGNAKGFVCSYHGMFGSNGELQSVPE 120
Db 61 IDEVIVSRQSDGSIRAFINVCRRHKGKTLVNAEAGNAKGFVCSYHGMFGSNGELQSVPE 120
QY 121 KOLYGESLNKKCLGLKEVARVESPHGTYGCFDQEAAPPLMDYLGDAAWYLEPMFKHSGGL 180
Db 121 KELYGESLNKKCLGLKEVARVESPHGTYGCFDQEAAPPLMDYLGDAAWYLEPMFKHSGGL 180
QY 181 ELVGPPGKVIKANWKAPAENFVGDAYHVGWTHASSLRSGESIFSSLAGNAALPPPEGAGL 240
Db 181 ELVGPPGKVIKANWKAPAENFVGDAYHVGWTHASSLRSGESIFSSLAGNAALPPPEGAGL 240
QY 241 QMTSKYSGMGVLWDGYSGVHSADLVPELMAFGAKOERLNKEIGDVRARIYRSHLACTV 300
Db 241 QMTSKYSGMGVLWDGYSGVHSADLVPELMAFGAKOERLNKEIGDVRARIYRSHLACTV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYATVERKMPEDLKRRLADSVQRTGPGPWES 360
Db 301 FPNNSVLTCSGVFKVWNPIDANTTEVWTYATVERKMPEDLKRRLADSVQRTGPGPWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLISNLGFGEDVYGDVYFGVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMETASQNGKKYQSRDSDLISNLGFGEDVYGDVYFGVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449
Db 421 QAHVSSSNWAEFEHASSTWHTLTKTTDR 449
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Search completed: December 9, 2003, 16:09:32  
Job time : 23.1429 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-33

Perfect score: 2408

Sequence: 1 MNYNKILVSEGLSQHLLI.....AFEHASSTWHTLTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

- 1: /cgn2\_6/ptodata/1/iaa/5A COMB.pep.\*
- 2: /cgn2\_6/ptodata/1/iaa/5B COMB.pep.\*
- 3: /cgn2\_6/ptodata/1/iaa/6A COMB.pep.\*
- 4: /cgn2\_6/ptodata/1/iaa/6B COMB.pep.\*
- 5: /cgn2\_6/ptodata/1/iaa/PTUS COMB.pep.\*
- 6: /cgn2\_6/ptodata/1/iaa/backfiles1.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	407.5	16.9	463	US-09-252-991A-31367	Sequence 31367, A
2	407.5	16.9	496	US-09-328-352-6452	Sequence 6452, A
3	388	16.1	445	US-09-328-352-7248	Sequence 7248, Ap
4	382.5	15.9	466	US-09-252-991A-31385	Sequence 31385, A
5	360	15.0	471	US-09-328-352-7581	Sequence 7581, Ap
6	344.5	14.3	425	US-09-252-991A-25088	Sequence 25088, A
7	291	12.1	449	US-09-252-991A-17164	Sequence 17164, A
8	278.5	11.6	375	US-09-328-352-4700	Sequence 4700, Ap
9	237.5	9.9	529	US-09-252-991A-19627	Sequence 19627, A
10	224	9.3	446	US-09-004-393B-4	Sequence 4, Appl
11	223	9.3	439	US-09-004-393B-2	Sequence 2, Appl
12	185	7.7	35	US-08-810-009-19	Sequence 19, Appl
13	174	7.2	35	US-08-810-009-20	Sequence 20, Appl
14	168	7.0	35	US-08-810-009-21	Sequence 21, Appl
15	143.5	6.0	629	US-09-252-991A-27100	Sequence 27100, A
16	128	5.3	352	US-09-328-352-6765	Sequence 6765, Ap
17	118.5	4.9	354	US-08-376-063E-4	Sequence 4, Appl
18	113.5	4.7	379	US-09-028-934-36	Sequence 36, Appl
19	110	4.6	35	US-08-810-009-12	Sequence 12, Appl
20	109	4.5	35	US-08-810-009-14	Sequence 14, Appl
21	109	4.5	364	US-09-328-352-4956	Sequence 4956, Ap
22	108	4.5	35	US-08-810-009-13	Sequence 13, Appl
23	108	4.5	35	US-08-810-009-15	Sequence 15, Appl
24	108	4.5	622	US-09-311-626B-4	Sequence 4, Appl
25	106.5	4.4	432	US-08-809-326A-16	Sequence 16, Appl
26	106.5	4.4	432	US-09-689-914A-16	Sequence 16, Appl
27	106.5	4.4	432	US-09-689-913A-16	Sequence 16, Appl

ALIGNMENTS

RESULT 1

US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A  
; Patent No. 6851795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; FILE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31367  
; LENGTH: 463  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31367

Query Match	16.9%	Score 407.5;	DB 4;	Length 463;
Best Local Similarity	29.0%	Pred. No. 2e-30;		
Matches 110;	Conservative 69;	Mismatches 149;	Indels 51;	Gaps 17;
QY	23	DBELFQHEKLTIFARNMLFLTHDSLIPAPGDYVTAKMGIDBIVSVRQNDGSGIRAFNLVYCR	82	
Db	38	DRFLPELEMKHIFEGNWWYLAHESQVAGVNDYLTITQIGRQSVIARNEDGQLNAFINACS	97	
QY	83	HRGKTLVSVKAGNAKGFVCSFHGFGSGNGLQSV--PFKDKLYCESLNKKCLG---LKE	137	
Db	98	HRGAMLCRHKSGNRSSTYTCPEHGTFTNNSGKLLKVKQPAEAG-YPOGFN--CEGSHDLTR	154	
QY	138	VARVESEFGTYGCDQAEAPPLMDYLGDAAMVLMPEMFGHS--GGLELYGPPGKVVKANWK	196	
Db	155	VARFESYGFGLFGLSLNPDVRPLAHLGHSAKIIDMVDQSPGELVLRGSSSYVEGNWK	214	
QY	197	APAENFVDAYHVG---WTHASS-----LRSGESIFSSLNAGNALPPEGAGLQ	241	
Db	215	LTAEN-GADGTHVSVHWNYYATQSQORDAADPLRT-----NSAGWAR---QGGGFY	265	
QY	242	MTSKYSGKGVWNGYSGVHSADLVPE-LMAFGAKQERLNKEIGDVNAR-IYHSHLNCT	299	
Db	266	---SFEHGHMLLWSWAN-----PEDRPAPF--ERRAELARDFGEARADMIENSRLC	313	
QY	300	VFPNNSML-TCSGVFKVKNVPIDANTTEWTVYAIVEKONPEDLKBRLADSVQRTAGPFW	358	
Db	314	LYPNVYLMQDQSSQIRIARPLSVDRTEITTYCIAPKGSAAERARRINQYEDFFNVSGMA	373	

QY 359 ESDNDNMETASQNGKKYQ 377  
 Db 374 TPDDLLEPRSCQOG---YQ 389

## RESULT 2

US-09-328-352-6452  
 ; Sequence 6452, Application US/09328352  
 ; Patent No. 6562958

## GENERAL INFORMATION:

APPLICANT: Gary L. Breton et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: GTC99-03PA  
 CURRENT APPLICATION NUMBER: US/09/328,352  
 CURRENT FILING DATE: 1999-06-04  
 NUMBER OF SEQ ID NOS: 8252

SEQ ID NO 6452

LENGTH: 496

TYPE: PRT

ORGANISM: Acinetobacter baumannii

US-09-328-352-6452

Query Match 16.9%; Score 407.5; DB 4; Length 496;

Best Local Similarity 31.3%; Pred. No. 2.2e-30;

Matches 105; Conservative 59; Mismatches 146; Indels 25; Gaps 13;

QY 23 DEELFOHELTIFARNWLFTHDSLIPAGDVTAKMGIDVIVSRQNDGSTRAPLNVC 82

Db 73 DEALFLEMKYIEGHWVYLAHESQIPNNDDYTTVIGRQPIIIRNRGELNMINACS 132

QY 83 HRGKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSPPEKDL-YGESLNKK-CIGLKEVAR 140

Db 133 HRGAQLCRYKGNKATVTCFPHGWTNNSSGLKLVKDPDAGYSDCFNGDGHDLCKVAR 192

QY 141 VESFHGFIYCGDQAEAPPLMDYLGDAAWYLEBPMFKHS-GGLELVGPPGKVVIKANWKAPA 199

Db 193 FESYKGLFGLSLNPDVPSLEEFGETTKIIDMTVDQSEHGLEVLIRGSGSTTVTEGNNKLTFA 252

QY 200 ENFVGDAHYHG---WTHASLRGSGESIFSSLAGNAALPPPGA-GLQWTSYK--SGMGVL 253

Db 253 EN-GADGYHVSANVHNYATQHKR--TQADNIRAMAGSGWKGQSGSYGFENGHMLL 309

QY 254 WDGYSGVHSADLVPELMAFGAKOERLNKEIGDVRAR--IYRSHLNTCTVFPNNKSLTCSG 311

Db 310 MTQWNPEDRPNEF-----KADYETKYGEAMSKMIERSR-NLCYFNVYLMDDQFG 360

QY 312 -VFKVNPIDANTTEVYTVAIVEK-DMPDLKREL 344

Db 361 SQIRVLRLPLSVNKTETVTVIYCIAPKGAPEARARRI 395

## RESULT 3

US-09-328-352-7248

; Sequence 7248, Application US/09328352

; Patent No. 6562958

## GENERAL INFORMATION:

APPLICANT: Gary L. Breton et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: GTC99-03PA  
 CURRENT APPLICATION NUMBER: US/09/328,352  
 CURRENT FILING DATE: 1999-06-04  
 NUMBER OF SEQ ID NOS: 8252

SEQ ID NO 7248

LENGTH: 445

TYPE: PRT

ORGANISM: Acinetobacter baumannii

US-09-328-352-7248

Query Match

Best Local Similarity 16.1%; Score 388; DB 4; Length 445;

Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 IHGDEBELFOHELTIFARNWLFTHDSLIPAGDVTAKMGIDVIVSRQNDGSTRAPLN 79  
 Db 47 LYKDERIFDEEMEKIFYSTWVVAHASEIPEGGSYKTTINIGKQPVVVVRDRKKVHVLIN 106  
 QY 80 VCRHGRKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSPPEKDLYGESLNKKCIGLKEVA 139  
 Db 107 RCHRAATVCEHKKGKNTSFVCPYGNVALDGSURGV-SPESYGCDLCKSELPLVSL- 164  
 QY 140 RYESFHGFIYCGDQAEAPPLMDYLGDAAWYLEBPMFKHSGG--LELVGP-----PKVVIK 192  
 Db 165 RVEEYNGMIPASFKEDIQLEEFLEFPAKWIIDLFMKQAGYPIKVLGEHRRFFFG----- 219  
 QY 193 ANWKAPAEKPFVGDVAVHGWTHASSLRS-----GESIFSSLAGNAALPPGAGLQWTSYKGS 248  
 Db 220 -NWKIOLEN-TTDAYHFLVHKSFLSSVDEKTEELFN-----PEN 257  
 QY 249 CMGVLWDGYSGVHSADLVPELMAFGAKOER-LNKEIGDVR-----ARIYR- 293  
 Db 258 QFGFVEDLGNHSHVNMVPELVDELLEDMERPIQERFEDLAQLRDEGHBELEVRIVRA 317  
 QY 294 ---SHLNTCTVFPNNKSLTCS-GVFKVNPIDANTTEVYTVAIVEK-----MPDLKRELA 345  
 Db 318 VGGSGFNLMNLPN---IACSNAPFRVLQPIVSAETEL-HHSVITMDGGPQIANQVRLHL 373  
 QY 346 DSVQRTAGPAGWESDDNDNMETASONGKKYQSRSDLLSLNGLFGEDVYGDVAVPGVVG- 404  
 Db 374 EHFQ---GPFQGTPTDSEAWERV-ORGAN-AGNDLMTMLNRGL-----PGEVKT 418  
 QY 405 ----KSAI-GETSVRGFYRAYQ 421  
 Db 419 EDGLASDVSAETGMRAYQQWK 440

## RESULT 4

US-09-252-991A-31385

; Sequence 31385, Application US/09252991A

; Patent No. 6551795

## GENERAL INFORMATION:

APPLICANT: Marc J. Rubenfield et al.  
 TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR FILING DATE: 1998-02-18

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 31385

LENGTH: 466

TYPE: PRT

ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-31385

## Query Match

Best Local Similarity 15.9%; Score 382.5; DB 4; Length 466;

Matches 120; Conservative 77; Mismatches 182; Indels 63; Gaps 18;

QY 23 DEELFOHELTIFARNWLFTHDSLIPAGDVTAKMGIDVIVSRQNDGSTRAPLNVC 82

Db 39 EPELFDEMLLEKWIYACHESLARPHDFVTLRAGROPLIVTRDNGQLHALVDACQ 98

QY 83 HRGKTLVSVBAGNAKGFVCSYHGWGFGSGNGELQSV--PFEKOLYGESLNKKCIGLKEVAR 140

Db 99 HRGATLVKVGKQSTFTCFPHAWCYKNDGRLVKVAPGE--YPEGFKATGLKK-AR 154

QY 141 VESFHGFIYCGDQAEAPPLMDYLGDAAWYLEBPMFKH--SGGLELVGPPGKVVIKANWKA 197

Db 155 IQSYRGFVFSVLVAGEDDLVDFGLDARVFLDMLVAQSPSGSELEVLPGTSTTYEGNWL 214

QY 198 PAENFVGDVAVHGWTHASSLRSGESIFSSLAGNAALPPGAGLQMT---SKYSGNGVL- 253



RESULT 9  
 US-09-252-991A-19627  
 : Sequence 19627, Application US/09252991A  
 : Patent No. 6551795  
 : GENERAL INFORMATION:  
 : APPLICANT: Marc J. Rubenfield et al.  
 : TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 : TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 : FILE REFERENCE: 107196.136  
 : CURRENT APPLICATION NUMBER: US/09/252,991A  
 : CURRENT FILING DATE: 1999-02-18  
 : PRIOR APPLICATION NUMBER: US 60/074,788  
 : PRIOR FILING DATE: 1998-02-18  
 : PRIOR APPLICATION NUMBER: US 60/094,190  
 : PRIOR FILING DATE: 1998-07-27  
 : NUMBER OF SEQ ID NOS: 33142  
 : SEQ ID NO 19627  
 : LENGTH: 529  
 : TYPE: PRT  
 : ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-19627

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Query Match          9.9%; Score 237.5; DB 4; Length 529;
Best local Similarity 24.9%; Pred. No. 4.2e-14;
Matches 86; Conservative .54; Mismatches 139; Indels 67; Gaps 15;

QY      30 ELKTI FARWLELTHDSLIAPGDYVTAKGIDBVIYSRQDGSIRAPLAVCRHRGKTLV 89
Db      173 EREKLFGRLMIFVGFSSWVRERNOQFFTRKTAGVPVVRQTESG--IRAPLNCOPHR--LSAI 230
QY      90 SVEAGNAKGVCYSYHGFGFSGNSGLOVPPEKDIYGESLNKKC--LGLKEVARVESFHGFI 148
Db      231 QTECTGQRPLVCPYHANSFGAEGQLQIP--NSSLYQFSABERARIGLRKL--HLEEVGQLL 288
QY      149 YGCFDQARPLMDYLGDAAWYLEPMFKHSGGLE--LVGPPGKVVIKAWKPAENFYGDA 206
Db      289 FVNLAADPLPLREQFDG--FLETIREVSSHLDTRLYSCHKV--RYNWKLNMMN--VKDY 343
QY      207 YHVQWTHASS--LRSGEIFSSLAGNAALP-----PEGAGLQMTSK-----YGS 248
Db      344 NHVFFVHPKTFPLPWTAPVRGLAREAAVPEVLELLQEGETPELRSLSFPTKAIQPYKS 403
QY      249 GMGYLMDGYGSHVASDLVPELMAFGGAKOBRLNKEIGDVRIARYSHLNCCTVFPNNSMLT 308
Db      404 WFDLCBGYGDH-----YNNWFIYENNVNFC5 431
QY      309 CSG---VFKWNPIDANTE--VWTYALVEKMDPELKRRLADSVQ 349
Db      432 VRGEHFLLOQYDPVAPGETDYLHMMWTARRKDPKPTDFSALLSTLIR 477

RESULT 10
US-09-004-393B-4
; Sequence 4, Application US/09004393B
; Patent No. 6310271
; GENERAL INFORMATION:

```



RESULT 13  
US-08-810-009-20  
; Sequence 20, Application US/08810009  
; Patent No. 6211437  
; GENERAL INFORMATION:  
; APPLICANT: Briggs, Steven P.  
; APPLICANT: Johal, Gurmukh S.  
; APPLICANT: Gray, John  
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING  
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS

```

; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 20:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-20

Query Match 7.2%; Score 174; DB 3; Length 35;
Best Local Similarity 85.7%; Pred. No. 7.8e-10;
Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVENAGNAKGFVCSYHGWGFGSGN 113
DB 1 NVCHRGKTLVSVENAGNAKGFVCSYHGWGFGSGN 35

RESULT 14
US-08-810-009-21
; Sequence 21, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patent in Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943

```

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; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 21:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-21

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Query Match 7.0%; Score 168; DB 3; Length 35;
Best Local Similarity 80.0%; Pred. No. 2.9e-09;
Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

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QY 79 NVCHRGKTLVSVENAGNAKGFVCSYHGWGFGSGN 113
DB 1 NVCHRGKTLVSVENAGNAKGFVCSYHGWGFGSGN 35

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RESULT 15
US-09-252-991A-27100
; Sequence 27100, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:

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; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; PRIOR FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/094,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 27100
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
; US-09-252-991A-27100

```

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Query Match 6.0%; Score 143.5; DB 4; Length 629;
Best Local Similarity 24.3%; Pred. No. 5.2e-05;
Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

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QY 4 NKILVSEGLSQKHLI--HGDEELFQHELTIPARN--WLFELTHDSLIPAPGDYVVTAKM 59
DB 247 SNRLFFVQKRLTWKSCLANHWIQLQKQREDPTMPFKNAWYVACTPDELAKGP---LGRRI 303

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QY 60 GIDEVIVSRQNDGSTRAFNLVCRHRGK--TLVSVENAGNAKGFVCSYHGWGFGSGN 117
DB 304 CDEPWFVYRGEDGRVALEDFCPHRGAPLSLGFVEDG---VLVCGYHGLANGEDGRTRAM 360

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QY 118 PFEDLYGESLNKCKGLKEVAR--VESFHGFY---GCFQDEAPPLMDYLDGAAWYLEP 172
DB 361 P-----GQVRGFPFCIRRRPPVQERHGFVVWFGAEQADANALIPRL---EWAESE 407

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QY 173 MFKHSGGLELVGPPGKVVKANWKAPEAFNVGDYHGWTHASSL-----R 218
DB 408 DWAYGGGL-----YHHCYRLMDNLN--DLTHETVHASSIGQKEIDEAAPTRVE 458

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QY 219 SGESIFSSLAGNAALPP-----EGAGL 240
DB 459 GDEVITSRHMQNVWAPPFWRMALRGNGL 486

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Search completed: December 9, 2003, 15:45:54
Job time : 13 secs

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GenCore version 5.1.6  
Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-35

Perfect score: 2408

Sequence: 1 MNYNNKILVSEGLSQKHLI.....ABFEHASSTWHTLTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

1: /cgn2\_6/ptodata/1/iaa/5A COMB.pep.\*  
2: /cgn2\_6/ptodata/1/iaa/5B COMB.pep.\*  
3: /cgn2\_6/ptodata/1/iaa/6A COMB.pep.\*  
4: /cgn2\_6/ptodata/1/iaa/6B COMB.pep.\*  
5: /cgn2\_6/ptodata/1/iaa/PCBUS COMB.pep.\*  
6: /cgn2\_6/ptodata/1/iaa/backfileel.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	409.5	17.0	463	4	US-09-252-991A-31367
2	407.5	16.9	496	4	US-09-328-352-6452
3	388	16.1	445	4	US-09-328-352-7248
4	384.5	16.0	466	4	US-09-252-991A-31385
5	363	15.1	471	4	US-09-328-352-7581
6	347.5	14.4	425	4	US-09-252-991A-25088
7	294	12.2	449	4	US-09-252-991A-17164
8	283.5	11.8	375	4	US-09-328-352-4700
9	237.5	9.9	529	4	US-09-252-991A-19627
10	224	9.3	446	4	US-09-004-393B-4
11	223	9.3	439	4	US-09-004-393B-2
12	185	7.7	35	3	US-08-810-009-19
13	174	7.2	35	3	US-08-810-009-20
14	168	7.0	35	3	US-08-810-009-21
15	143.5	6.0	629	4	US-09-252-991A-27100
16	128	5.3	392	4	US-09-328-352-6765
17	118.5	4.9	354	4	US-08-976-063E-4
18	113.5	4.7	379	3	US-09-028-934-36
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-14
21	108	4.5	35	3	US-08-810-009-13
22	108	4.5	35	3	US-08-810-009-15
23	108	4.5	622	4	US-09-311-626B-4
24	106	4.4	35	3	US-08-810-009-9
25	106	4.4	364	4	US-09-328-352-4956
26	104	4.3	35	3	US-08-810-009-18
27	103.5	4.3	432	3	US-08-809-326A-16

28	103.5	4.3	432	4	US-09-689-914A-16	Sequence 16, Appl
29	103.5	4.3	432	4	US-09-689-913A-16	Sequence 16, Appl
30	103.5	4.3	432	4	US-09-689-916A-16	Sequence 16, Appl
31	103.5	4.3	649	3	US-08-809-326A-15	Sequence 15, Appl
32	103.5	4.3	649	4	US-09-689-914A-15	Sequence 15, Appl
33	103.5	4.3	649	4	US-09-689-913A-15	Sequence 15, Appl
34	103.5	4.3	649	4	US-09-689-916A-15	Sequence 15, Appl
35	103	4.3	35	3	US-08-810-009-11	Sequence 11, Appl
36	102	4.2	35	3	US-08-810-009-8	Sequence 8, Appl
37	102	4.2	35	3	US-08-810-009-10	Sequence 10, Appl
38	101	4.2	17	3	US-08-810-009-44	Sequence 44, Appl
39	101	4.2	17	3	US-08-810-009-45	Sequence 45, Appl
40	100.5	4.2	363	4	US-09-328-352-5961	Sequence 5961, Ap
41	100	4.2	35	3	US-08-810-009-17	Sequence 17, Appl
42	99.5	4.1	256	4	US-09-325-932A-57	Sequence 57, Appl
43	99	4.1	1132	4	US-09-198-452A-466	Sequence 466, App
44	97.5	4.0	395	4	US-09-252-991A-28371	Sequence 28371, A
45	95	3.9	17	3	US-08-810-009-46	Sequence 46, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; FILE REFERENCE: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31367  
; LENGTH: 463  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31367

Query Match		17.0%;	Score 409.5;	DB 4;	Length 463;
Best Local Similarity		29.0%;	Pred. No. 2.3e-30;		
Matches 110;		Conservative 69;	Mismatches 149;	Indels 51;	Gaps 17;
QY	23	DEELFOHELKTIFARNWLFTHDSLI	PAPGDYVTA	KMGID	DEVIVSRONDGSTRAPLVNCR 82
DB	38	DPRLFELEKHFEGNWNVLAHESQ	VAGVNDYLT	IQGRQSVI	ARNEDGQLNAFINACS 97
QY	83	HRGKTLVSVEAGNAKGFVCSYH	GWGFGSNG	ELQSV-	-PFKDLYESLNKKCLG---LKE 137
DB	98	HRGAMLCRHCNRSRSTCPFHG	WTNNKLLK	VKDPAEAG	-YPOGFN--CEGSHDLTR 154
QY	138	VARVESPFHGYGCFDQAPLMD	YLGDAWVLE	PMFKHS	-CGLELVGPPGVKVIKANWK 196
DB	155	VARFESYFGFLGSLNPDPVR	PLAEHLGES	AKIMDIVQ	SPGEGLEVLKRGSSVYVEGNWK 214
QY	197	APAEVFGDAXHVG---	WTHASS-----	LRSGESIF	SLAGNAALPPEGAGLQ 241
DB	215	LTAEN-GADGHVSVVHNYATQ	SQROORDA	DLRT----	MSAAGWAR---QGGGFY 265
QY	242	MTSKYSGGVLWDGYSGVSH	ADLVPE	-LMAFGGAK	QERLNKEIGDVRAE- IYRSHLNC 299
DB	266	---SFEHGMLMSRWAN-----	PEDRPAP-	-ERRAELAR	DGFEARADWMIENSRLC 313
QY	300	VPNNMSL-TSGVFKVWNPID	ANTTEVTV	TAIVKOMP	EDLKRRLAUSVQRTLGPAFW 358
DB	314	LYPNVLMQFSSQIRIARPL	SVDRTEIT	ITTCIAPG	ESAERARRIRQYEDFFNVSGMA 373

QY 359 ESDNDNMTASQNGKKYQ 377  
Db 374 TPDLEFRSCQOQ---YQ 389

RESULT 2  
US-09-328-352-6452  
; Sequence 6452, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; CURRENT FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 6452  
; LENGTH: 496  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-6452

Query Match 16.9%; Score 407.5; DB 4; Length 496;  
Best Local Similarity 31.3%; Pred. No. 4e-30;  
Matches 105; Conservative 59; Mismatches 146; Indels 25; Gaps 13;

QY 23 DEELFQHELKTI FARNWFLTHDSLIPAPGDYVTAQMGIDVIVSRQNDGSIRAFNLVCR 82  
Db 73 DEALFQELMKYIPEGNNVLAHESQIPNNDDYTYTIGRQPIIAHNRNGLNMINACS 132  
QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGSGNGELQSPFEXDL-YGESLNKK-CLGLKEVAR 140  
Db 133 HRGAQLCRYKGNKATYTCFHCWTNNKLLKVPDPTDAGYSDCFNGDQSHDLKKVAR 192  
QY 141 VESFHGIYGCDOEAPPLMDYLGDAAWYLEPWFKEH-CGLELVGPPGKVVIKANWAPA 199  
Db 193 FESYKGLFGLSLNPDVPSLEEFGETTKIIDIVDQSGELVLRGSSYTYTTEGNNKLT 252  
QY 200 ENFVGDAYHVG---WTHASSLSGESIFSSLAGNAALPEGA-GLQMTSKY--SGMGVL 253  
Db 253 EN-GADGIVHSAVHMYAATQHRKE--TQADNIRAMSGAGKQGGSGYFENGHMLL 309  
QY 254 WDGYSGVHSADLVPELMAGFAGKQERLKEIGDVAR--IYSHLNCTVFPNNMLTCG 311  
Db 310 WTQMANPEDRPNPP-----KADRYTEKYGEAMSKWMIERSR-NLCLYPNVILMDQFG 360  
QY 312 -VPKVNRPIDANTTYVTVAIVEK-DMPEDLKERL 344  
Db 361 SQIRVLRLSVNRTEVTIYCIAPGAPAPARARRI 395

RESULT 3  
US-09-328-352-7248  
; Sequence 7248, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; CURRENT FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 7248  
; LENGTH: 445  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-7248

Query Match 16.1%; Score 388; DB 4; Length 445;  
Best Local Similarity 28.1%; Pred. No. 2.4e-28;  
Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 IHGDEELFQHELKTI FARNWFLTHDSLIPAPGDYVTAQMGIDVIVSRQNDGSIRAFNL 79  
Db 47 LYDERIFDEEMKIFYSTWVAHASEIPEGGSYKINIGKQPVVVVRDKKVVHLLN 106  
QY 80 VCRHRTKTLVSVEAGNAKGFVCSYHGWGSGNGELQSPFEXDL-YGESLNKK-CLGLKEVA 139  
Db 107 RCRHRAATVCEHKKGTNSFVCPYHGSYALDGLSLRGVP-SPESYGDCLDKSELPLVSL- 164  
QY 140 RVESFHGIYGCDOEAPPLMDYLGDAAWYLEPWFKEHSGG--LELVGP-----PGKVVIK 192  
Db 165 RVEYNGMIFASFKEDELOPEEFUGPARKMIDLDFMKQAGYPIKVLGEHRFRFP 219  
QY 193 ANWKAPAEFVGDYHVGWTHASSLSRSGSIFSSLAGNAALPEGAQLQMTSKYS 248  
Db 220 -NWKIQLN-TTDAYHFLVHKSFLSSVDEKTELEN-----PEN 257  
QY 249 GNGVLMDGYSGVHSADLVPELMAGFAGKQER-LNKEIGDVR-----ARIYR- 293  
Db 258 QPGFVEDLNGHNSVMMVITPELVLEEDLMERPIQERFEDLAQALRDEGHEBELEVRIVRA 317  
QY 294 ---SHLNCTVFPNNMLTCS-GVFKVNPIDANTTYVTVAIVEK---MPEDLKERLA 345  
Db 318 VGGSGFNLNLPN---IACSNAPFRVLQPISSVAETEI-HHSVITWDCGPGQIANQYRLRH 373  
QY 346 DSVQRTLTGPGAFWESDDNDNMTASQNGKKYQSRDSDLLSNLGFEGEDVYGDVAVPGVVG- 404  
Db 374 EHFQ---GPFQFGTDDSEAWERV-QHGAN-AGNDLWMLNRLG-----PGEVKT 418  
QY 405 ----KSAI-GETSVRGFYRAYQ 421  
Db 419 EDGLKSDVSAETGMRAAYQQWK 440

RESULT 4  
US-09-252-991A-31385  
; Sequence 31385, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31385  
; LENGTH: 466  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31385

Query Match 16.0%; Score 384.5; DB 4; Length 466;  
Best Local Similarity 27.1%; Pred. No. 5.5e-28;  
Matches 120; Conservative 77; Mismatches 182; Indels 63; Gaps 18;

QY 23 DEELFQHELKTI FARNWFLTHDSLIPAPGDYVTAQMGIDVIVSRQNDGSIRAFNLVCR 82  
Db 39 EPFLFDLEMLIFEKNIYACHESLARPHDFVTLRAGRQPLIVTRDNGQLHALVDACQ 98  
QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGSGNGELQSPV--PFKDIYGESLNKKCLGLKEVAR 140  
Db 99 HRGATLVKVGKNGQSTFTCPFHAWCYKNDGRLVKVAPGE---YPEGFDKATRLGKK-AR 154  
QY 141 VESFHGIYGCDOEAPPLMDYLGDAAWYLEPWFKEH--SGGLELVGPPGKVVIKANWKA 197  
Db 155 IQSVRGVFFVSLDVGEDDLVDLGDARVFLDMLVAQSPSGELEVLPGTSTTYTEGNNKL 214  
QY 198 PAENFVGDAYHVGWTHASSLSRSGSIFSSLAGNAALPEGAQLQMT---SKYSGMGVL- 253

Db 215 QNENGL-DGHHVSTVHYNTV-ATVQHQVVEAERGGAATLDYSKLGAGDAATD 266  
QY 254 --WDGYSVGHV-----ADLVPELMAFGGAKQERLNKEIGDVRARIYRSHL 296  
Db 267 DGFSPFANGHSULFSPMPNPAVRPGVASYMPRLVA-----EYQARAEWMMHRL 315  
QY 297 -NCTVFPNNSML-TCSGVFKVMPIDANTTEVMTVAI-VEKMPEDLKRRLADSVQRTIG 353  
Db 316 ENLNLPSLFLVIDQISSQLRIVRPLAWNTEIVSQIGVKGESDADRENRII-QFEDPFP 374  
QY 354 PAGFWESDNDNNMETASQNGKKYQSRDSDLLSNLGFEDVYGDVYGVGKSAI---GE 410  
Db 375 VSGWGTDDLVEFREAQGFQARLERWSDI--SRHGKWLKLGATNSQALGAPLITGTE 432  
QY 411 TSVRGFYRAYQAHVSSNNABF 432  
Db 433 ITHGLYVQNAH-----WRRF 449

## RESULT 5

US-09-328-352-7581  
; Sequence 7581, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; PRIOR FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 7581  
; LENGTH: 471  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-7581

Query Match 15.1%; Score 363; DB 4; Length 471;  
Best Local Similarity 25.8%; Pred. No. 6.1e-26;  
Matches 114; Conservative 70; Mismatches 180; Indels 78; Gaps 16;  
QY 23 DEKLPHKLTIPARNWFLTHDSLIPAGDYVTAKMGIDDEVIVSQNDGSTRAPLNVCR 82  
Db 35 EPELPDLEMEFIEKVMIVACHSEIENNHDFLTQIGRQPIIVSRDGGELHAMYNACE 94  
QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSGNCELOSVPEKDLGYESLNKKCLGLKEVARVE 142  
Db 95 HRGATLTVAKGNQSTFTCPFHAWCYKSDGRLVKVKAPSE-YCEDPDKSSRGLKQ-GRTA 152  
QY 143 SFHGFIYGCDFDQEA-PPLMDYLGDAAWYLEPMFKHS--GGLELVGPPGKVVIKANWKAPA 199  
Db 153 SYRGFVFLDVTQATSDLEDFLDGAKLFLDLVWVQSPTELEVLQKSSYTFAGNWLQN 212  
QY 200 ENFVGDAYHYGWT--ASSLSGESIFSSLAGNAALPPEGAGLQMT--SKYSGMGVLW 254  
Db 213 ENGL-DGHHVSTVHYNVSTVQHQVNAS-----KGAEIDTLDYSKLGAGDSETD 262  
QY 255 DGYSGVHSDLV-----PELMAFGGAKQERLNKEIGDVRARIYRSHL-NCTVFPNNSM 306  
Db 263 DGFSPFNGHSVLFSMPNPTVRPGSYVMPYVYKGYAEAWAHLRLNLSLPSLFF 322  
QY 307 L-TCSGVFKVMPIDANTTEVMTVAI-VEKMPEDLKRRLADSVQRTIGPAGFWESDNDN 365  
Db 323 MDQISSQLRIVRPAWAKTEV-----ISQIGVKG--ES----- 354  
QY 366 METASQNGKKYQSRDSDLLSNLGFEDVYGDVYGVGKSAISETSYRGFYRAYQAHVS 425  
Db 355 --TEARRNRIRQPEDFPNSGLQTPDDL-----VEPFQKQGFQARL- 394  
QY 426 SSNAWFEHASSWHTLTKTT 447  
Db 395 -ERWSDISRCQSWEGATKNS 415

## RESULT 6

US-09-252-991A-25088  
; Sequence 25088, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; PRIOR FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 25088  
; LENGTH: 425  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-25088

Query Match 14.4%; Score 347.5; DB 4; Length 425;  
Best Local Similarity 27.4%; Pred. No. 1.5e-24;  
Matches 114; Conservative 72; Mismatches 177; Indels 53; Gaps 15;

QY 25 ELFOHELKTIIPARNWFLTHDSLIPAGDYVTAKMGIDDEVIVSQNDGSTRAPLNVCEHR 84  
Db 25 ELHRELHEIFDSDSWLYAAHLSELREPFGDFTTRDVGGRNLIQRRADGEPAYILNACARH 84  
QY 85 GKTLLVSVEAGNAKGFVCSYHGWGFGSGNCELOSVPEKDLGYESLNKKCLGLKEVARVES- 143  
Db 85 GAKVCAERQNGSQRTCPYHGWYDSDSGSLGLCP-DKAAAYQHA--GQCHPBLSLTRVXHA 141  
QY 144 -FHGFIYGCDFDQEA-PPLMDYLGDAAWYLEPMFKHS--GGLELVGPPGKVVIKANWKAPAEN 201  
Db 142 VYRNFLETHYAAQPSLETYLQAKDYIDLICDQSEALEIIPGGFHSIKANNKLLAEN 201  
QY 202 FVGDAYHYGWT--ASSLSGESIFSSLAGNAALPPEGAGLQMTSKYSGMGVLWGYGVH 261  
Db 202 GV-DAYHLPPFAKHYLEYLNLT-----GTDPESHKHGRG-EALGNHALTI 246  
QY 262 S-----ADLVPE-LMAFGGAKQERLNKEIGDVRAR-IYRSHLNCVFPN--N 304  
Db 247 SGFSTGCRPIAYWSPLEALKPSIAKFERLVERFGQARAEDIAHTNKSIFIPNLVIN 306  
QY 305 SMLTCSGVFKVMPIDANTTEVMTVAI-VEKMPEDLKRRLADSVQRTIGPAGFWESDND 364  
Db 307 DILGLN--IRSFPTADEVSVTVWGAGFADREBERAARINGLISFIGPGGFTPDVE 364  
QY 365 NMETASQNGKKYQSRDSDLLSNLGFEDVYGDVYGVGKSAISETSYRGFYRAY 420  
Db 365 TLBSQ-----RAYAH-----AALGYSDFSRG-----MGPATRRHYDDEQNRGFREW 407

## RESULT 7

US-09-252-991A-17164  
; Sequence 17164, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; PRIOR FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142



```

QY   147 PIYCCEDEAPPLMD-----YLGDRAVYLEPWFKEH--GGLELVGPDPKVVIAKKAKPAE 200
      |:|::||::||::||::||::||::||::||::||::||::||::||::||::||::||:
Db   224 FVLISLRSLIEGDDVGTEWLGTSA---EDVKAHAFDPSLQFI-HRSEFFPMESNWKIFSD 279
      |:::||||:|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:
QY   201 NFVDGAHVGVWTH 213
      |:|::|||:|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:
Db   280 NYLDSSVHYPIAH 292
      |:::||||:|::|::|::|::|::|::|::|::|::|::|::|::|::|::|::|:

RESULT 12
US-08-810-009-19
; Sequence 19, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: NO. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatenIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5719-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-19

Query Match          7.7%; Score 185; DB 3; Length 35;
Best Local Similarity 94.3%; Pred. No. 8.9e-11;
Matches 33; Conservative 1; Mismatches 1; Indels 0; Gaps 0;

QY       79 NVCHRGKTLSVEAGNAKGPFVCYSYHGWGFGSGNGE 113
      |||::|||::|||::|||::|||::|||::|||::|||::|||::|||:
Db       1 NVCHRGKTLSVEAGNAKGPFVCYSYHGWGFGSGNK 35
      |||::|||::|||::|||::|||::|||::|||::|||::|||::|||:

RESULT 13
US-08-810-009-20
; Sequence 20, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
```

NUMBER OF SEQUENCES: 65  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
STREET: P.O. Drawer 34009  
CITY: Charlotte  
STATE: No. 2811437th Carolina  
COUNTRY: USA  
ZIP: 28234  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/810,009  
FILING DATE: 04-MAR-1997  
CLASSIFICATION: 800  
ATTORNEY/AGENT INFORMATION:  
NAME: Spruill, W. Murray  
REGISTRATION NUMBER: 32,943  
REFERENCE/DOCKET NUMBER: 5718-4  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 919-881-3140  
TELEFAX: 919-881-3175  
INFORMATION FOR SEQ ID NO: 20:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 35 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-810-009-20

Query Match 7.2%; Score 174; DB 3; Length 35;  
Best Local Similarity 85.7%; Pred. No. 9.8e-10;  
Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGE 113  
Db 1 NVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGK 35

RESULT 14  
US-08-810-009-21  
Sequence 21, Application US/08810009  
Patent No. 6211437  
GENERAL INFORMATION:  
APPLICANT: Briggs, Steven P.  
APPLICANT: Johal, Gurmukh S.  
APPLICANT: Gray, John  
TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING  
TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS  
NUMBER OF SEQUENCES: 65  
CORRESPONDENCE ADDRESS:  
ADDRESSEE: BELL, SELTZER, PARK & GIBSON  
STREET: P.O. Drawer 34009  
CITY: Charlotte  
STATE: No. 2811437th Carolina  
COUNTRY: USA  
ZIP: 28234  
COMPUTER READABLE FORM:  
MEDIUM TYPE: Floppy disk  
COMPUTER: IBM PC compatible  
OPERATING SYSTEM: PC-DOS/MS-DOS  
SOFTWARE: PatentIn Release #1.0, Version #1.30  
CURRENT APPLICATION DATA:  
APPLICATION NUMBER: US/08/810,009  
FILING DATE: 04-MAR-1997  
CLASSIFICATION: 800  
ATTORNEY/AGENT INFORMATION:  
NAME: Spruill, W. Murray  
REGISTRATION NUMBER: 32,943

REFERENCE/DOCKET NUMBER: 5718-4  
TELECOMMUNICATION INFORMATION:  
TELEPHONE: 919-881-3140  
TELEFAX: 919-881-3175  
INFORMATION FOR SEQ ID NO: 21:  
SEQUENCE CHARACTERISTICS:  
LENGTH: 35 amino acids  
TYPE: amino acid  
STRANDEDNESS:  
TOPOLOGY: linear  
MOLECULE TYPE: protein  
US-08-810-009-21

Query Match 7.0%; Score 168; DB 3; Length 35;  
Best Local Similarity 80.0%; Pred. No. 3.6e-09;  
Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGE 113  
Db 1 NVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGK 35

RESULT 15  
US-09-252-991A-27100  
Sequence 27100, Application US/09252991A  
Patent No. 6551795  
GENERAL INFORMATION:  
APPLICANT: Marc J. Rubenfield et al.  
TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
FILE REFERENCE: 107196.136  
CURRENT APPLICATION NUMBER: US/09/252.991A  
CURRENT FILING DATE: 1999-02-18  
PRIOR APPLICATION NUMBER: US 60/074,788  
PRIOR FILING DATE: 1998-02-18  
PRIOR APPLICATION NUMBER: US 60/094,190  
PRIOR FILING DATE: 1998-07-27  
NUMBER OF SEQ ID NOS: 33142  
SEQ ID NO 27100  
LENGTH: 629  
TYPE: PRT  
ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;  
Best Local Similarity 24.3%; Pred. No. 6.2e-05;  
Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NKKILVSEGLSQKHLI--HGDELFQHEKLTIPARN--WLFTHDSLIPAGDYVTAKM 59  
Db 247 SNRLFFVQKRLTWKSCLANHWIQKQREDPTMPFKUAVTACTPDELAKGP---LGRRI 303  
QY 60 GIDRIVSVQRDGSIRAFNVCHRGK--TLVSVAGNAKGFVCSYHGWGFGSGNGELQSV 117  
Db 304 CDEPWFVTRGEDGRVALEDFCHRGAPLSLGFVEDG---VLVCGYHGLAMGEDGRTRAM 360  
QY 118 PFEXDLYGESLNKKLGLKEVAR--VESPHGFTY---GCFDQAEAPPLMDYLGDAAWTLEP 172  
Db 361 P-----GQVRGFPFCIRFPVQERHGFWVWFGAEQDAALIPLR---EWAESP 407  
QY 173 MFKHSGLLELVGPPGKVVIKANAKPAENFVGDAYHVGWTHASSL-----R 218  
Db 408 DWAYGGGL-----YHICDYRLMIDNLM-DLTHETVYHASSIGQKEIDEAAPTRVE 458  
QY 219 SGESIFSSLAGNALPP-----EGACL 240  
Db 459 GDEVITSRHMQNVMAPEFWRMALRGNGL 486

Search completed: December 9, 2003, 15:45:55  
Job time : 12 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)  
3771.269 Million cell updates/sec

Title: US-09-843-250-35

Perfect score: 2408

Sequence: 1 MNNKILVSSGLSQKHLI.....AEFEHASHTWELTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries

#### Database :

Published Applications AA:

- 1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pbp.\*
- 2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pbp.\*
- 3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pbp.\*
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- 11: /cgn2\_6/ptodata/1/pubpaa/US09C\_PUBCOMB.pbp.\*
- 12: /cgn2\_6/ptodata/1/pubpaa/US09\_NEW\_PUB.pbp.\*
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- 15: /cgn2\_6/ptodata/1/pubpaa/US10C\_PUBCOMB.pbp.\*
- 16: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pbp.\*
- 17: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pbp.\*
- 18: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pbp.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2408	100.0	449	11	US-09-843-250-35
2	2406	99.9	449	11	US-09-843-250-36
3	2405	99.9	449	11	US-09-843-250-2
4	2405	99.9	449	11	US-09-843-250-14
5	2405	99.9	449	11	US-09-843-250-15
6	2404	99.8	449	11	US-09-843-250-26
7	2403	99.8	449	11	US-09-843-250-33
8	2403	99.8	449	11	US-09-843-250-34
9	2403	99.8	449	11	US-09-843-250-59
10	2402	99.8	449	11	US-09-843-250-58
11	2400	99.7	449	11	US-09-843-250-16
12	2400	99.7	449	11	US-09-843-250-32
13	2395	99.5	449	11	US-09-843-250-17
14	2347	97.5	449	11	US-09-843-250-18
15	2319	96.3	449	11	US-09-843-250-19

16	2293	95.2	449	11	US-09-843-250-20	Sequence 20, Appl
17	2220	92.2	449	11	US-09-843-250-21	Sequence 21, Appl
18	2190	90.9	447	11	US-09-843-250-22	Sequence 22, Appl
19	2053	85.3	447	11	US-09-843-250-23	Sequence 23, Appl
20	1969.5	81.8	451	11	US-09-843-250-24	Sequence 24, Appl
21	737	30.6	453	9	US-09-815-342-10253	Sequence 10253, A
22	377	15.7	490	10	US-09-738-626-6140	Sequence 6140, Ap
23	376.5	15.6	385	9	US-09-815-242-11692	Sequence 11692, A
24	339.5	14.1	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
38	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	107.5	4.5	951	10	US-09-324-097-15	Sequence 15, Appl
44	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
45	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-843-250-35  
; Sequence 35, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 35  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.  
US-09-843-250-35

Query Match 100.0%; Score 2408; DB 11; Length 449;

Best Local Similarity 100.0%; Pred. No. 5.2e-226; Mismatches 0; Indels 0; Gaps 0;  
Matches 449; Conservative 0;

QY 1 MNNKILVSSGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAGDYVTAKMG 60

Db 1 MNNKILVSSGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSTRAFNLVCRHGKTLIVSVEAGNAKGFVCSYHGNGFGSGNGELQSVFPE 120

Db 61 IDEVIVSRQNDGSTRAFNLVCRHGKTLIVSVEAGNAKGFVCSYHGNGFGSGNGELQSVFPE 120

QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240  
DB 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240  
QY 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKOMPEDLKRRLADSVQRTLGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKOMPEDLKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMTASONGKCYQSRDSDLLSNLGFGEVDYGDVAVPGVVGKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMTASONGKCYQSRDSDLLSNLGFGEVDYGDVAVPGVVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFHASSTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFHASSTWHTLTKTTDR 449

## RESULT 2

US-09-843-250-36  
; Sequence 36, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Reenick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 36  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.  
US-09-843-250-36

Query Match 99.9%; Score 2406; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 8.1e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 MYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWFLTHDSLIPAGDYVTAKMG 60  
DB 1 MYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWFLTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQDGSIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
DB 61 IDEVIVSRQDGSIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240  
DB 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240

QY 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
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DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKOMPEDLKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMTASONGKCYQSRDSDLLSNLGFGEVDYGDVAVPGVVGKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMTASONGKCYQSRDSDLLSNLGFGEVDYGDVAVPGVVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFHASSTWHTLTKTTDR 449  
DB 421 QAHVSSSNWAEFHASSTWHTLTKTTDR 449

## RESULT 3

US-09-843-250-2  
; Sequence 2, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Reenick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1  
US-09-843-250-2

Query Match 99.9%; Score 2405; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1e-225;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

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DB 1 MYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWFLTHDSLIPAGDYVTAKMG 60  
QY 61 IDEVIVSRQDGSIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
DB 61 IDEVIVSRQDGSIRAFNLVCHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KDIYGESLNKCKLGLKEVARVESFHGFIYCGFQEQEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240  
DB 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPPEGAGL 240  
QY 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGSGVLDWGYSGVSHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNTV 300  
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DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKOMPEDLKRRLADSVQRTLGPAGFWES 360  
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Db 361 DDNDNMETASQNGKQSRSDLLSNLGFEDYGDVAVPGVVGKSAIGTSTRGYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 4

US-09-843-250-14  
; Sequence 14, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Farales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 14  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.  
US-09-843-250-14

Query Match 99.9%; Score 2405; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1e-225;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MYNNKILVSESGLSQKHLHGDELFQHELKTI FARNWLFTHDSLIPAGDYVTAKWG 60  
Db 1 MYNNKILVSESGLSQKHLHGDELFQHELKTI FARNWLFTHDSLIPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSI RALNVCRRGKTLVSVZAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSI RALNVCRRGKTLVSVZAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVVVKANWKAPAEFVGDVAVHGVWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVVVKANWKAPAEFVGDVAVHGVWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLMWDYSGVSHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLMWDYSGVSHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCV 300  
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360  
Db 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMETASQNGKQSRSDLLSNLGFEDYGDVAVPGVVGKSAIGTSTRGYRAY 420  
Db 361 DDNDNMETASQNGKQSRSDLLSNLGFEDYGDVAVPGVVGKSAIGTSTRGYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 5

US-09-843-250-26  
; Sequence 26, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Farales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Farales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.  
US-09-843-250-15

Query Match 99.9%; Score 2405; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1e-225;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MYNNKILVSESGLSQKHLHGDELFQHELKTI FARNWLFTHDSLIPAGDYVTAKWG 60  
Db 1 MYNNKILVSESGLSQKHLHGDELFQHELKTI FARNWLFTHDSLIPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSI RALNVCRRGKTLVSVZAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSI RALNVCRRGKTLVSVZAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVVVKANWKAPAEFVGDVAVHGVWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVVVKANWKAPAEFVGDVAVHGVWTHASSIRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLMWDYSGVSHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLMWDYSGVSHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCV 300  
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360  
Db 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMETASQNGKQSRSDLLSNLGFEDYGDVAVPGVVGKSAIGTSTRGYRAY 420  
Db 361 DDNDNMETASQNGKQSRSDLLSNLGFEDYGDVAVPGVVGKSAIGTSTRGYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

## RESULT 6

US-09-843-250-26  
; Sequence 26, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Farales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the

```

; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 26
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Pseudomonas sp.
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:26
US-09-843-250-26

```

```

Query Match          99.8%; Score 2404; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.3e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNNYNNKILVSSGLSQKHLIHGDEELFOHELKTIIPARNWLFTHDSLIIPAGDYVTAKMG 60
Db 1 MNNYNNKILVSSGLSQKHLIHGDEELFOHELKTIIPARNWLFTHDSLIIPAGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILSVVEAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
Db 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILSVVEAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPBGKVVIIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPBGKVVIIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCVT 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCVT 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360
QY 361 DDNDNMETASQKKYQSRDSDLLSNLGFGEVDYGVVGVGKSAIGETSYRGFYRAY 420
Db 361 DDNDNMETASQKKYQSRDSDLLSNLGFGEVDYGVVGVGKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

```

```

RESULT 7
US-09-843-250-33
; Sequence 33, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 33
; LENGTH: 449

```

```

; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.
US-09-843-250-33

```

```

Query Match          99.8%; Score 2403; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.6e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNNYNNKILVSSGLSQKHLIHGDEELFOHELKTIIPARNWLFTHDSLIIPAGDYVTAKMG 60
Db 1 MNNYNNKILVSSGLSQKHLIHGDEELFOHELKTIIPARNWLFTHDSLIIPAGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILSVVEAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
Db 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILSVVEAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120
QY 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPBGKVVIIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPBGKVVIIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCVT 300
Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCVT 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTVAIVEKMPEDLKRRLADSVQRTLGPAGFWES 360
QY 361 DDNDNMETASQKKYQSRDSDLLSNLGFGEVDYGVVGVGKSAIGETSYRGFYRAY 420
Db 361 DDNDNMETASQKKYQSRDSDLLSNLGFGEVDYGVVGVGKSAIGETSYRGFYRAY 420
QY 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

```

```

RESULT 8
US-09-843-250-34
; Sequence 34, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 34
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.
US-09-843-250-34

```

```

Query Match          99.8%; Score 2403; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.6e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```

```

QY 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
DB 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
QY 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120
DB 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120
QY 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLWDGYSVGHSAIDLVPFELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLWDGYSVGHSAIDLVPFELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEWTVYAIVEKOMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEWTVYAIVEKOMPEDLKRRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449

```

## RESULT 9

```

US-09-843-250-59
; Sequence 59, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR FILING DATE: 1999-10-26
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 59
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.
US-09-843-250-59

```

```

Query Match 99.8%; Score 2403; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 1.6e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
DB 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
QY 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120
DB 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120

```

```

QY 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLWDGYSVGHSAIDLVPFELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
DB 241 QMTSKYSGMGVLWDGYSVGHSAIDLVPFELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEWTVYAIVEKOMPEDLKRRLADSVQRTTGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEWTVYAIVEKOMPEDLKRRLADSVQRTTGPAGFWES 360
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449
DB 421 QAHVSSSNWAEFEHASSTWHTLTKTDDR 449

```

## RESULT 10

```

US-09-843-250-58
; Sequence 58, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR FILING DATE: 1999-10-26
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 58
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.
US-09-843-250-58

```

```

Query Match 99.8%; Score 2402; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 2e-225;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
DB 1 MNYNNKILVSSGLSQKHLHGDEBELFOHELKTIIFARNWLFTHDSLIPAGDVTYAKMG 60
QY 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120
DB 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVEAGNAGKFVCSYHGWGFGSNGELQSVPE 120
QY 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KOLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPFGKVVTKANWKAPAENFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLWDGYSVGHSAIDLVPFELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300

```

Db 241 QMTSKYSGVGLWDGYSVGHSAADLPVLPALFAGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 11  
US-09-843-250-16  
; Sequence 16, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 16  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.7%; Score 2400; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 3.1e-225;  
Matches 447; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGTILSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120  
Db 61 IDEVIVSRQNDGSIIRAFINVCRRHGTILSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120  
QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGGL 180  
Db 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGGL 180  
QY 181 ELVGPPGKVVIRKANWKAPAEFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPPGKVVIRKANWKAPAEFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGVGLWDGYSVGHSAADLPVLPALFAGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGVGLWDGYSVGHSAADLPVLPALFAGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420

Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 12  
US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match 99.7%; Score 2400; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.1e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGTILSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120  
Db 61 IDEVIVSRQNDGSIIRAFINVCRRHGTILSVBAGNAKGFVCSYHGWGFGSGNGELQSVFPE 120  
QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGGL 180  
Db 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGGL 180  
QY 181 ELVGPPGKVVIRKANWKAPAEFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPPGKVVIRKANWKAPAEFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGVGLWDGYSVGHSAADLPVLPALFAGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGVGLWDGYSVGHSAADLPVLPALFAGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPDIANTTEVWTVAIVKDMPELKRRLADSVQRTLGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGTSTYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTDDR 449

RESULT 13  
US-09-843-250-17



```

; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: xaa = any amino acid.
US-09-843-250-19

Query Match          96.3%; Score 2319; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 2.5e-217;
Matches 429; Conservative 13; Mismatches 7; Indels 0; Gaps 0;

QY 1 MNTNNKILVSEGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIIPAGDYVTAKMG 60
Db 1 MNTNNKILVSEGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIIPAGDYVTAKMG 60
QY 61 IDEVIVSRQDSIRAFANVCRHRGKTLVSVENAGNKGFTVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQDSIRAFANVCRHRGKTLVSVENAGNKGFTVCSYHGWGFGSNGELQSVPE 120
QY 121 KOLYGESLNKKKCLGLKXVARVESFHGFIYGCDFQEAAPPLMDYLGDAAWYLEPWFKHSGL 180
Db 121 KOLYGESLNKKKCLGLKXVARVESFHGFIYGCDFQEAAPPLMDYLGDAAWYLEPWFKHSGL 180
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGWGVLWDGYGVHSAADLPELMAFGKQKQBELNKEIGDVRARIYRSHLNCVT 300
Db 241 QMTSKYSGWGVLWDGYGVHSAADLPELMAFGKQKQBELNKEIGDVRARIYRSHLNCVT 300
QY 301 FPNNSMLTCSGVFKWNPIDANTTEWTYAIYEKOMPEDLKERLADSVORTLGPAGFWES 360
Db 301 FPNNSMLTCSGVFKWNPIDANTTEWTYAIYEKOMPEDLKERLADSVORTLGPAGFWES 360
QY 361 DDNDNMTASONGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMTASONGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449
Db 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449
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Search completed: December 9, 2003, 16:09:35  
Job time : 23.1429 secs



GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-36

Perfect score: 2408

Sequence: 1 MYNNKILVSEGLSQKHLI.....APEHASSTWHTLTKTIDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*\*

1: /cgn2\_6/ptodata/1/iaa/5A COMB.pdp.\*  
2: /cgn2\_6/ptodata/1/iaa/5B COMB.pdp.\*  
3: /cgn2\_6/ptodata/1/iaa/6A COMB.pdp.\*  
4: /cgn2\_6/ptodata/1/iaa/6B COMB.pdp.\*  
5: /cgn2\_6/ptodata/1/iaa/PTUS COMB.pdp.\*  
6: /cgn2\_6/ptodata/1/iaa/backfiles.pdp.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	409.5	17.0	463	4	US-09-252-991A-31367
2	407.5	16.9	496	4	US-09-328-352-6452
3	388	16.1	445	4	US-09-328-352-7248
4	386	16.0	466	4	US-09-252-991A-31385
5	365	15.2	471	4	US-09-328-352-7581
6	349.5	14.5	425	4	US-09-252-991A-25088
7	296	12.3	449	4	US-09-252-991A-17164
8	281.5	11.7	375	4	US-09-328-352-4700
9	237.5	9.9	529	4	US-09-252-991A-19627
10	224	9.3	446	4	US-09-004-393B-4
11	223	9.3	439	4	US-09-004-393B-2
12	185	7.7	35	3	US-08-810-009-19
13	174	7.2	35	3	US-08-810-009-20
14	168	7.0	35	3	US-08-810-009-21
15	143.5	6.0	629	4	US-09-252-991A-27100
16	128	5.3	392	4	US-09-328-352-6765
17	118.5	4.9	354	4	US-08-976-063B-4
18	112.5	4.7	379	3	US-09-028-934-26
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-14
21	108	4.5	35	3	US-08-810-009-13
22	108	4.5	35	3	US-08-810-009-15
23	106	4.5	622	4	US-09-311-626B-4
24	106	4.4	35	3	US-08-810-009-9
25	106	4.4	364	4	US-09-328-352-4956
26	104	4.3	35	3	US-08-810-009-18
27	103.5	4.3	432	3	US-08-809-326A-16

28	103.5	4.3	432	4	US-09-689-914A-16
29	103.5	4.3	432	4	US-09-689-913A-16
30	103.5	4.3	432	4	US-09-689-916A-16
31	103.5	4.3	649	3	US-08-809-326A-15
32	103.5	4.3	649	4	US-09-689-914A-15
33	103.5	4.3	649	4	US-09-689-913A-15
34	103.5	4.3	649	4	US-09-689-916A-15
35	103	4.3	35	3	US-08-810-009-11
36	102	4.2	35	3	US-08-810-009-8
37	102	4.2	35	3	US-08-810-009-10
38	101	4.2	17	3	US-08-810-009-44
39	101	4.2	17	3	US-08-810-009-45
40	100.5	4.2	363	4	US-09-328-352-5961
41	100	4.2	35	3	US-08-810-009-17
42	99.5	4.1	256	4	US-09-325-932A-57
43	99	4.1	1132	4	US-09-198-452A-466
44	97.5	4.0	395	4	US-09-252-991A-28371
45	95	3.9	17	3	US-08-810-009-46

## ALIGNMENTS

### RESULT 1

US-09-252-991A-31367  
; Sequence 31367, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; CURRENT FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31367  
; LENGTH: 463  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31367

Query Match	17.0%;	Score	409.5;	DB 4;	Length	463;			
Best Local Similarity	29.0%;	Pred. No.	1.9e-30;						
Matches	110;	Conservative	69;	Mismatches	149;	Indels	51;	Gaps	17;
QY	23	DEELFOHELTIFARNWLFTHDSLPAPGDVVTAKMGIDEVIVSRQNDGSIKRAFLAVCR	82						
Db	38	DPRLFELEMKHIFEGNWTYLHESQVAGVNDYLTQIGRQIVIVARNDDGQLNAFINACS	97						
QY	83	HRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSV--PFKDLVYGESLNKKCLG---LKE	137						
Db	98	HRGAMLCRHKSGNRSSYTCPPHGWTFNNSGKLLKVKDPAEAG-YPQGFN--CEGSHDLTR	154						
QY	138	VARVESFHFYIGCFDQAPLMDYLGDAANVLEPMFKHS-GGLELVGPPGKVIKAWK	196						
Db	155	VARPESYRGFLFGSLNPDVRFLEHLGESAKIIDMVDQSPGSLVLRSSSYVVEGNWK	214						
QY	197	APAEHNFVGDYHVG---WTHASS-----LRSGESIFSLAGNAALPPEGAGLQ	241						
Db	215	LTAEN-GADGTHSVSVHNTVARTQSQRQORDAADPLRT-----NSAAGWAR---QGGGFY	265						
QY	242	MTSKYSGSGVLMDCYSGVSHSADLVPE-LMAFGGAKQERLNKIGDVREAR-IYRSHLNCT	299						
Db	266	---SFEHGHMLLWSWAN-----PEDRPAF--ERRAELARDFGEARADWNENRNLC	313						
QY	300	VFPNNSML-TCSGVFKVKNPDANTTEVTTVAIVEKMPEDLKRRLADSVQRTTGPAGFW	358						
Db	314	LYPNVYLMQDFSSQIRIARPLSVDRTEITTYCIAPKGSAAERARRIQVDFDFNVSGMA	373						

QY 359 ESDNDNMETASQNGKKYQ 377  
Db 374 TPDDLEFRSCQGG---YQ 389

RESULT 2  
US-09-328-352-6452  
; Sequence 6452, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; CURRENT FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 6452  
; LENGTH: 496  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-6452

Query Match  
Best Local Similarity 16.9%; Score 407.5; DB 4; Length 496;  
Matches 105; Conservative 59; Mismatches 146; Indels 25; Gaps 13;

QY 23 DEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKMGIDIVISRONDSIRAFINVC 82  
Db 73 DEALFLEMKYIFEGNVLIAHESQIPNNNDYTYTIGRQPIIARNRNGLNMINACS 132  
QY 83 HRGKTLVSVEAGNAKGFVCSYHGMGFGSNGELQSVFPEKDL-YGSELNKK-CLGLKEVAR 140  
Db 133 HRGAQLCRYKGNKATYTCFFHGTNNKGLKVKDPTDAGYSDCFNQGSHDLKKVAR 192  
QY 141 VESFHGFIYCGFOEAPPLMDYLGDAAWYLEPMFKHIS-GGLELVGPPGKVVIKANWKA 199  
Db 193 FESYKGFLEGLNPDPVSELEEFGETTKIDIMVDQSEHGLEVLIRGSSTTYEGNWKLT 252  
QY 200 ENFVGDAYHVG---WTHASSLRGSGIFSGLAGNAALPPEGA-GLQMTSKY--SGMGVL 253  
Db 253 EN-GADGIVSAVHMYATQHXE--TQADNIRAMSAGSWGKCGGSGYFENGHMLL 309  
QY 254 WDGYSGVHSADLVPELMFAGGAQERLKEIGDVAR--IYRSHLNCITVFPNNMLTCSG 311  
Db 310 WTOWANPEDRPFP-----KADEYTKYGEAMSKWMIERS-NLCILYPNVILMDQFG 360  
QY 312 -VFKVNPIDANTTEVMTVAIVEK-DMPEDLKERL 344  
Db 361 SQIRVLRLPSVNTTEVTIICIAPKGAPEARARRI 395

RESULT 3  
US-09-328-352-7248  
; Sequence 7248, Application US/09328352  
; Patent No. 6562958  
; GENERAL INFORMATION:  
; APPLICANT: Gary L. Breton et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
; FILE REFERENCE: GTC99-03PA  
; CURRENT APPLICATION NUMBER: US/09/328,352  
; CURRENT FILING DATE: 1999-06-04  
; NUMBER OF SEQ ID NOS: 8252  
; SEQ ID NO 7248  
; LENGTH: 445  
; TYPE: PRT  
; ORGANISM: Acinetobacter baumannii  
US-09-328-352-7248

Query Match  
Best Local Similarity 16.1%; Score 388; DB 4; Length 445;  
Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 IHGDELFQHELKTIIFARNWLFTHDSLIPAPGDYVYAKMGIDIVISRONDSIRAFIN 79  
Db 47 LYKDERIFDEMEKIFYSTVWVAHASEIPGSGYKTNIGKQPVVVVDRKKKHVLLN 106

QY 80 VCRHRGKTLVSVEAGNAKGFVCSYHGMGFGSNGELQSVFPEKDLYGSLNKKCLGLKEVA 139  
Db 107 RCRHRAATVCEHKKGTNSFCVPYHGSVALDGSILRGP-SPESYGDCLDKSELPLVSL- 164

QY 140 RVESFHGFIYCGFOEAPPLMDYLGDAAWYLEPMFKHISGG--LELVGP-----PKVVIK 192  
Db 165 RVEETNGMIFASFREDIOPLFEFLGPAKKWIDLFMKQAGAYPIKVLGHEHRRFRFG- 219

QY 193 ANMKAPAEFVGDYHVGWTHASSLRS---GESIFSSLACNAALPPEGAGLQMTSKYGS 248  
Db 220 -NWKIQLEN-TTDAYHFFLVHKSFLSSVDEKTEHFN-----FEN 257

QY 249 QMGVLWDGYSGVHSADLVPELMFAGGAQER-LNKEIGDVR-----ARIYR- 293  
Db 258 QPGFVEDLGNHSHVMWIPELVDLEEDLMERPISOERPEDLAQALRDGHEBELEVRIVRA 317

QY 294 ---SHLNCITVFPNNMLTCS-GVFKVNPIDANTTEVMTVAIVEK-----MPEDLKERLA 345  
Db 318 VGGSGFNILNLPN---IACSNAPFRVLQPISSVAETEI-HHSVITMDGGPQTIANQYRLRLH 373

QY 346 DSVQRTTIGPAGFMESDDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVG- 404  
Db 374 EHFQ---GPPFGFPTDSEAWERV-QRGAN-AGNDLWIMLNRGL-----PGEVKT 418

QY 405 ----KSAI-GETSYRGFYRAYQ 421  
Db 419 EDGLKSDVSAETGMRAAYQOMK 440

RESULT 4  
US-09-252-991A-31385  
; Sequence 31385, Application US/09252991A  
; Patent No. 6551795  
; GENERAL INFORMATION:  
; APPLICANT: Marc J. Rubenfield et al.  
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
; FILE REFERENCE: 107196.136  
; CURRENT APPLICATION NUMBER: US/09/252,991A  
; PRIOR FILING DATE: 1999-02-18  
; PRIOR APPLICATION NUMBER: US 60/074,788  
; PRIOR FILING DATE: 1998-02-18  
; PRIOR APPLICATION NUMBER: US 60/094,190  
; PRIOR FILING DATE: 1998-07-27  
; NUMBER OF SEQ ID NOS: 33142  
; SEQ ID NO 31385  
; LENGTH: 466  
; TYPE: PRT  
; ORGANISM: Pseudomonas aeruginosa  
US-09-252-991A-31385

Query Match  
Best Local Similarity 16.0%; Score 386; DB 4; Length 466;  
Matches 117; Conservative 71; Mismatches 157; Indels 100; Gaps 18;

QY 23 DEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKMGIDIVISRONDSIRAFINVC 82  
Db 39 EPELFDLEMBELIFEKNIYACHESLARPHDFVTLRAGRQPLIVTRDGNQLHALVDACQ 98

QY 83 HRGKTLVSVEAGNAKGFVCSYHGMGFGSNGELQSV--PPEKDLYGSLNKKCLGLKEVAR 140  
Db 99 HRGATLVRVGKNGQSTFTCPFHAWCYKNDGRLVKVAPGE---YPEGFDKATRGLKK-AR 154

QY 141 VESFHGFIYCGFOEAPPLMDYLGDAAWYLEPMFKHIS--SGGLELVGPPGKVVIKANWKA 197  
Db 155 IQSTRGVFVSLDVAGEDDLVDFIGDARVFLDMLVVAQSPSGSELEVLPGTSTTYEGNWK 214

QY 198 PAENFVGDAYHVGWTHASSLRGSGIFSSLAGNAALPPEGAGLQMT---SKYSGMGVL- 253

Db 215 QNENGL-DGHHVSTVTHNYV-ATVQHRQVEAERGVAATLDYSKLGAGDAATD 266  
 QY 254 --WDGYSGVHS-ADLPPELMAFGGAQERLKEIGDVRARIYRSHL 296  
 Db 267 DGNFSPANGSHVLPSEMPNPAVRPGYASVMPRLVA-EYQARAEWMMHRL 315  
 QY 297 -NCTVPNNML-TCGSGVFKVWNPIDANTTEVMTYIAVEKMPEDIKRRLADSVQRTIGP 354  
 Db 316 RLNLPSLFLVIDQISSQLRIVPLAWNRTEI-----VSQIGV 354  
 QY 355 AGFWESDDNMMETASQNGKQYRSRDLNLSGFGEDVYGDVAVYGVGKSAIGTSTYR 414  
 Db 355 KG--ESD-ADRENRIQFEDFFNVSGMGTPDDL-----VFR 388  
 QY 415 GFYRAYQAHVSSNNWAEFEHASSTM 439  
 Db 389 EAQRGQARL--ERMSDISRCHGKW 411

## RESULT 5

US-09-328-352-7581

; Sequence 7581, Application US/09328352

; Patent No. 6562958

; GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER

; FILE REFERENCE: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS

; CURRENT APPLICATION NUMBER: US/09/328,352

; NUMBER OF SEQ ID NOS: 8252

; SEQ ID NO 7581

; LENGTH: 471

; TYPE: PRT

; ORGANISM: Acinetobacter baumannii

US-09-328-352-7581

Query Match 15.2%; Score 365; DB 4; Length 471;  
 Best Local Similarity 26.0%; Pred. No. 3.3e-26;  
 Matches 115; Conservative 69; Mismatches 180; Indels 78; Gaps 16;

QY 23 DBELFOHELKTIIFARNWLFTHDSLIPAGDYVTAKMGIDIVSRQNDGSIRAFINVCRR 82  
 Db 35 EBELFLEMEFIEFKYWIYACHSEIPNNHDELTVQIGRQPIIVSRDGGELHVMNACE 94  
 QY 83 HRGKTLVSVEAGNAKGVCSYHGWGSGNGELQSVPEKDLGYESLNKCLGKEVARVE 142  
 Db 95 HRGATLTVAKGNQSTFTCFPHANCYSQDRLVVKVAPSE-YCEDFDKSSRLKQ-GRIA 152  
 QY 143 SFHGFIYGCDFQDEA-PPLMDYLGDAAWYLEPMPFKHS--GGLBLVGPFGKVKVIANWKAPA 199  
 Db 153 SYRGFVFSLDQATDLSDELGDALFLDMVNSPTGLEVLQKSSYTFAGNKLQW 212  
 QY 200 ENFVGDAYVNGWTH---ASSLSAGESIFSSLAGNAALPEGLQMTS-KYSGSGKGVLM 254  
 Db 213 ENGL-DGHHVSTVTHNYVSTVQRRQVNAS-----KGAELDTLDYSKLGAGDSETD 262  
 QY 255 DGVSGVHSADLV-----PELMAFGGAQERLKEIGDVRARIYRSHL-NCTVPNNM 306  
 Db 263 DGNFSPANGSHVLPSEMPNPTVRPGYSTVMPVVEKYGEKYAEWMMHRLNINLPSLFF 322  
 QY 307 L-TCGSGVFKVWNPIDANTTEVMTYIAVEKMPEDIKRRLADSVQRTIGPAGFWESDDND 365  
 Db 323 MQQISSQLRIVRPVANKTEV-----ISQIGVKG--ES----- 354  
 QY 366 METASQNGKQYRSRDLNLSGFGEDVYGDVAVYGVGKSAIGTSTYRQVAVS 425  
 Db 355 --TEARNRIQFEDFFNVSGMLGTPDDL-----VFR 388  
 QY 426 SSNNAEFHASSTWHTLTKTT 447  
 Db 395 -ERMSDISRQSQWEGYATKNS 415

## RESULT 6

US-09-252-991A-25088

; Sequence 25088, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; FILE REFERENCE: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

; CURRENT APPLICATION NUMBER: US/09/252,991A

; NUMBER OF SEQ ID NOS: 33142

; SEQ ID NO 25088

; LENGTH: 425

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-25088

Query Match 14.5%; Score 349.5; DB 4; Length 425;  
 Best Local Similarity 27.6%; Pred. No. 8.5e-25;  
 Matches 115; Conservative 71; Mismatches 177; Indels 53; Gaps 15;

QY 25 ELFOHELKTIIFARNWLFTHDSLIPAGDYVTAKMGIDIVSRQNDGSIRAFINVCRR 84  
 Db 25 ELHRELHEIFDDSWLYAAHLSELREPQDFTTRDVGGRENLIQRRADGEPAYVILNACAR 84  
 QY 85 GKTLSVEAGNAKGVCSYHGWGSGNGELQSVPEKDLGYESLNKCLGKEVARVES- 143  
 Db 85 GAKVCAERQSGNSQRTCTPHYGWTYDSHSLGLP-DKAAVQHA--GQCHPELSLTVKHA 141  
 QY 144 -FHGFIYGCDFQDEA-PPLMDYLGDAAWYLEPMPFKHS--GGLBLVGPFGKVKVIANWKAPAEN 201  
 Db 142 VYRNFELFIHYAARQPSLETYLQAKDYIDLICDQSEAELEIPGPFHSIYANWKLAE 201  
 QY 202 FVGDAYVNGWTHASLSAGESIFSSLAGNAALPEGLQMTS-KYSGSGKGVLMWPGYSGVH 261  
 Db 202 GV-DAYHLPFAHKRYLEYLNTL-----GTDPESHKRGKRG-EALGNHALLI 246  
 QY 262 S-----ADLYPE-LMAFGGAQERLKEIGDVRAR-TYRSHLNCVTFFN---N 304  
 Db 247 SGPFSTGRPIAYWSPFLPPEALXPSIAAKFBLVERFGQARAEDTAHTNKSIFIPNLVIN 306  
 QY 305 SMLTCGSGVFKVWNPIDANTTEVMTYIAVEKMPEDIKRRLADSVQRTIGPAGFWESDDND 364  
 Db 307 DILGN--IRSFPTADEVSVTVWAGFADETEEEAARINGLISFIGFGGTDPDVE 364  
 QY 365 NMTASQNGKQYRSRDLNLSGFGEDVYGDVAVYGVGKSAIGTSTYRQVAVS 420  
 Db 365 ILESCQ--RAYAH-----AALGYSDPSRG---MGPATRRHVDEBQNGFWREW 407

## RESULT 7

US-09-252-991A-17164

; Sequence 17164, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; FILE REFERENCE: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS

; CURRENT APPLICATION NUMBER: US/09/252,991A

; NUMBER OF SEQ ID NOS: 33142

; SEQ ID NO 17164

; LENGTH: 425

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-17164

; SEQ ID NO 17164

; LENGTH: 449

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-17164

Query Match

Best Local Similarity 12.3%; Score 296; DB 4; Length 449;

Matches 112; Conservative 53; Mismatches 159; Indels 96; Gaps 17;

QY 23 DEELFQHLKTFIARNMLFLTHDSLIPAPGDVYVAKMGIDVIVSRQDGSIRAPLVNCR 82

DB 60 DQRLFEIDMQELIFKHEWLAGTCISIPAKGNFLTLQIGKNPVLVIRGAGQVHAFHNCR 119

QY 83 HRGKTLVSVEAGNAKGFVCSYHGMGFGSNGELQSVFFKOLYGESLNKCLGLKEVARVE 142

DB 120 HRSRLCVSEKGVAKLVCPYHQWYELDGRLL---FAGTEMGADFDMKEYGLAPI-QVK 175

QY 143 SPHGTYGCFDQEAFLMDYLGDAAWYLPMPKHSGLGELVGPCKGVK-----ANWK 196

DB 176 TAGGYIFISLAENPAIDDELATLEHYMEPYDMEN-----AKVAVQTTIREAANK 226

QY 197 APAENFVGDYHVGMTHASSLSGSISSLAGNAALPEAGLQMTSKYSGHGVLDG 256

DB 227 LVNEN-NRECYHCNGSHPELLK-----TLEWDDVTDPRAS--QAFKQVAACTSAWD- 276

QY 257 YGVHSADLVPELMA-FG-----GAKQ---ERLNKEIGDVRA 289

DB 277 -----AEKIPYAHASFGRLNRIVRPLLDGTVMTMDGKQSKKLGMRIKPNLDGSMRI 330

QY 290 RIYRSHLACTVFPNNMLTCSG-----VFKVNPIDANTTEVWTYAIIVKOMP 338

DB 331 ----LHL-----PSHWNHGMGDLIVFTVW-FISAQETLVTKLVHDKDAVEGYDVDA 379

QY 339 -----DLKRLADSVQRTIGFAGFWESDDNDNMTASQNKYQSRDSDLSNLG 388

DB 380 RLREVDATNDQDRLAEBENQRGINSDAYQCPYKTYEFGVINFLDWIS--ERMLNNG 437

RESULT 8

US-09-328-352-4700

; Sequence 4700, Application US/09328352

; Patent No. 6562958

; GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER

; FILE REFERENCE: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS

; CURRENT APPLICATION NUMBER: US/09/328,352

; PRIOR FILING DATE: 1999-06-04

; NUMBER OF SEQ ID NOS: 8252

; SEQ ID NO 4700

; LENGTH: 375

; TYPE: PRT

; ORGANISM: Acinetobacter baumannii

US-09-328-352-4700

Query Match

Best Local Similarity 11.7%; Score 281.5; DB 4; Length 375;

Matches 97; Conservative 58; Mismatches 130; Indels 85; Gaps 17;

QY 19 LTHGDEELFQHLKTFIARNMLFLTHDSLIPAPGDVYVAKMGIDVIVSRQDGSIRAPLVNCR 78

DB 28 VFTTSQVFEHEKEVIFAKSWICVAHSGELAQPNDIYTRKVGINIVIRGKDSVLRIFY 87

QY 79 NYCRIRGKTLVSVEAGNAKGFVCSYHGMGFGSNGELQSVFFKOLYGESLNKCLGLKEVARVE 130

DB 88 NVCPHGHLLS--GSGKAKNVITCPIYHANTFKLDGSLALARNCDHVESFDXB-----NS 140

QY 131 KCLGLKEVARVESFHGTYGCFDQEAFLMDYLGDAAWYLPMPKHSGLGELVGPCKGVK 190

DB 141 SNVPLK----VEEYAGFVFINNENATCVEDQL---PGFAELNQAQGVKDLKLARFV 193

QY 191 IK--ANWKAPAENFVGDYHVGMTHASSLSGSISSLAGNAALPEAGLQMTSKYGS 248

DB 194 TETPANMKVIVDNVM-ECYHCGPAH-----PGFADSVQVDKYWH 231

QY 249 GMGVLDGYSVHSADLVPELMAFGGAKQRLNKKEIGDVRIYRSHLNCVTF---PNNS 305

DB 232 TTHQNTLTQY-----FARSSEKSPKLDPSVTDPEFHGFWT-WPCTMFNVPPGSN 280

QY 306 MLTCSGVFKVWNPIDANTTEVWTYAIV-----EKDM-----PEDLKRRLADS 347

DB 281 FWTYIYEF---PDAETT-LQHYDIYFTNEELTQDKOLIEWYRNVFRPEDL--NLVES 333

QY 348 VQRTIGPAGEF 357

DB 334 VQRLKSRGY 343

RESULT 9

US-09-252-991A-19627

; Sequence 19627, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; FILE REFERENCE: 107196.136

; CURRENT APPLICATION NUMBER: US/09/252,991A

; PRIOR FILING DATE: 1999-02-18

; PRIOR FILING DATE: 1998-02-18

; PRIOR FILING DATE: 1998-07-27

; NUMBER OF SEQ ID NOS: 33142

; SEQ ID NO 19627

; LENGTH: 529

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-19627

Query Match

Best Local Similarity 9.9%; Score 237.5; DB 4; Length 529;

Matches 86; Conservative 54; Mismatches 139; Indels 67; Gaps 15;

QY 30 ELKTFIFARNMLFLTHDSLIPAPGDVYVAKMGIDVIVSRQDGSIRAFNVCHRGKTLV 89

DB 173 ERERLFGRLMIFVGFSSMVRERHQFFTRKIAGVVPVVVQRTESG-IRAFNLQCFHR-LSAI 230

QY 90 SVENAGNAKGFVCSYHGMGFGSNGELQSVFFKOLYGESLNKKE-LGLKEVARVESFHGFI 148

DB 231 QTECTGQRLVCPYHAWSGFAGGQLOGIP-NSSLYQFSABERARIGRLKL-HLEEVGQLL 288

QY 149 YGCPDQEAFLMDYLGDAAWYLPMPKHSGLGELVGPCKGVKIVKAPENFVGDA 206

DB 289 FVNLAADDPLREQFDDG--FLETREVSRLDTRLIYSCHKV--RYNWKLNEN-VKDY 343

QY 207 YHGVTHASS-LRSGESIFSSLAGNAALP-----PEGAGLQMTSK-----YGS 248

DB 344 NHVPFVHPKTFPLPMTAPVRGLAREAAVPSVLRLLQEBGETPELRSLSFPTKAPIQYKS 403

QY 249 GMGVLDGYSVHSADLVPELMAFGGAKQRLNKKEIGDVRIYRSHLNCVTFPPNNMILT 308

DB 404 WFSDLCEGYGDEH-----AYYWFYIPNVNFGS 431

QY 309 CSG---VFKVWNPIDANTTE--VWTYAIIVKOMPEDLKRRLADSVC 349

DB 432 VRGEHFLQYDPAVCPGETDYLWMTARTARKDKPTDFSAALLTLIR 477

RESULT 10

US-09-004-393B-4

; Sequence 4, Application US/09004393B

; Patent No. 6310271

; GENERAL INFORMATION:

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QY 147 FYIGCFDQBARPLMD-----YLGDAWVLEWPFKHS--GGLELVGPPGKVVVKANWKPAB 200
DB 224 FLLSLDRSLREGGDVGTWELGTSA---EDVKAHAFDPSLQFT-HRSEPFMESNNKIFSD 275
QY 201 NFVGDAYHVGWTH 213
DB 280 NYLDSYHVPPYAH 292

RESULT 12
US-08-810-009-19
; Sequence 19, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 6211437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: PatentIn Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718--4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 19:
; SEQUENCE CHARACTERISTICS:
; LENGTH: 35 amino acids
; TYPE: amino acid
; STRANDEDNESS:
; TOPOLOGY: linear
; MOLECULE TYPE: protein
; US-08-810-009-19

Query Match 7.7%; Score 185; DB 3; Length 35;
Best Local Similarity 94.3%; Pred. No. 8.2e-11;
Matches 33; Conservative 1; Mismatches 1; Indels 0; Gaps 0

QY 79 NVCHRKGTLVSVVAGNAKGFVCSYHGWGFGSNGE 113
DB 1 NVCHRKGTLVSVVAGNAKGFVCSYHGWGFGSNGK 35

RESULT 13
US-08-810-009-20
; Sequence 20, Application US/08810009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS

```

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/ NUMBER OF SEQUENCES: 65
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: BELL, SELTZER, PARK & GIBSON
/ STREET: P.O. Drawer 34009
/ CITY: Charlotte
/ STATE: No. 6211437th Carolina
/ COUNTRY: USA
/ ZIP: 28234
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ OPERATING SYSTEM: IBM PC compatible
/ SOFTWARE: PatentIn Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/810,009
/ FILING DATE: 04-MAR-1997
/ CLASSIFICATION: 800
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Spruill, W. Murray
/ REGISTRATION NUMBER: 32,943
/ REFERENCE/DOCKET NUMBER: 5718-4
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 919-881-3140
/ TELEFAX: 919-881-3175
/ TELEX: 575102
/ INFORMATION FOR SEQ ID NO: 20:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 35 amino acids
/ TYPE: amino acid
/ STRANDEDNESS:
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-08-810-009-20

Query Match 7.2%; Score 174; DB 3; Length 35;
Best Local Similarity 85.7%; Pred. No. 9.1e-10;
Matches 30; Conservative 2; Mismatches 3; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSEAGNAKGFVCSYHGWGFGSNGE 113
DB 1 NVCHRGKTLVNAEAGNAKGFVCSYHGWGFGSNGK 35

RESULT 14
US-08-810-009-21
/ Sequence 21, Application US/08810009
/ Patent No. 6211437
/ GENERAL INFORMATION:
/ APPLICANT: Briggs, Steven P.
/ APPLICANT: Johal, Gurmukh S.
/ APPLICANT: Gray, John
/ TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
/ TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
/ NUMBER OF SEQUENCES: 65
/ CORRESPONDENCE ADDRESS:
/ ADDRESSEE: BELL, SELTZER, PARK & GIBSON
/ STREET: P.O. Drawer 34009
/ CITY: Charlotte
/ STATE: No. 6211437th Carolina
/ COUNTRY: USA
/ ZIP: 28234
/ COMPUTER READABLE FORM:
/ MEDIUM TYPE: Floppy disk
/ OPERATING SYSTEM: IBM PC compatible
/ SOFTWARE: PatentIn Release #1.0, Version #1.30
/ CURRENT APPLICATION DATA:
/ APPLICATION NUMBER: US/08/810,009
/ FILING DATE: 04-MAR-1997
/ CLASSIFICATION: 800
/ ATTORNEY/AGENT INFORMATION:
/ NAME: Spruill, W. Murray
/ REGISTRATION NUMBER: 32,943

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/ REFERENCE/DOCKET NUMBER: 5718-4
/ TELECOMMUNICATION INFORMATION:
/ TELEPHONE: 919-881-3140
/ TELEFAX: 919-881-3175
/ TELEX: 575102
/ INFORMATION FOR SEQ ID NO: 21:
/ SEQUENCE CHARACTERISTICS:
/ LENGTH: 35 amino acids
/ TYPE: amino acid
/ STRANDEDNESS:
/ TOPOLOGY: linear
/ MOLECULE TYPE: protein
/ US-08-810-009-21

Query Match 7.0%; Score 168; DB 3; Length 35;
Best Local Similarity 80.0%; Pred. No. 3.4e-09;
Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSEAGNAKGFVCSYHGWGFGSNGE 113
DB 1 NVCHRGKTLVDAEAGNAKGFVCSYHGWGFGSNGK 35

RESULT 15
US-09-252-991A-27100
/ Sequence 27100, Application US/09252991A
/ Patent No. 6551795
/ GENERAL INFORMATION:
/ APPLICANT: Marc J. Rubenfield et al.
/ TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
/ TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
/ FILE REFERENCE: 107196.136
/ CURRENT APPLICATION NUMBER: US/09/252,991A
/ CURRENT FILING DATE: 1999-02-18
/ PRIOR APPLICATION NUMBER: US 60/074,788
/ PRIOR FILING DATE: 1998-02-18
/ PRIOR APPLICATION NUMBER: US 60/094,190
/ PRIOR FILING DATE: 1998-07-27
/ NUMBER OF SEQ ID NOS: 33142
/ SEQ ID NO 27100
/ LENGTH: 629
/ TYPE: PRT
/ ORGANISM: Pseudomonas aeruginosa
/ US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;
Best Local Similarity 24.3%; Pred. No. 5.9e-05;
Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NKKILVSEGLSQKHLI--HGDELFQHELTIFARN--WLFTHDSLIPAPGDYVYAKM 59
DB 247 SNRLFFVQKLTWKSCLANHIQLQKQREDPTFFPKNAVYVACTPDLAKP---LGRRI 303
QY 60 GIDEVIVSRQDGSIRAFNVCHRGK--TLNVSVEAGNAKGFVCSYHGWGFGSNGELQSV 117
DB 304 CDEPMVFYRGEDGRVAALDFCPHGAFLSLGFVEDG---VLVCGYHGLAMGEDGRTRAM 360
QY 118 PFKEKDLVGSINKKCLGLKEVAR--VESFHGTY---GCFDQEAAPPLMDYVLDAAWVLEP 172
DB 361 P-----GQVRGFFCIRFPQERHGFVWVWPGAEQDAALIPRL---EWAESP 407
QY 173 MFKHSGGLVPGPKVKVIAKNAKPAENFVGDVAVHVGWTHASSL-----R 218
DB 408 DWAYGGGL-----YHIHCDYRLMDNLM;PLTHETVTHASSICQKEIDEAAPTTRYE 458
QY 219 SGESIFSSSLAGNAALPP-----EGAGL 240
DB 459 GDEVITSRHMVQNVMAFPFWRMALRGNGL 486

Search completed: December 9, 2003, 15:45:56
Job time : 13 secs

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GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
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3771.269 Million cell updates/sec

Title: US-09-843-250-36

Perfect score: 2408

Sequence: 1 MYNKKILVSEGLSQKHLI.....AEFEHASSTWHTLTKTDR 449

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Searched: 694280 seqs, 18593659 residues

Total number of hits satisfying chosen parameters: 694280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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Published Applications AA:\*  
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
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2	2407	100.0	449	11	US-09-843-250-2
3	2407	100.0	449	11	US-09-843-250-14
4	2407	100.0	449	11	US-09-843-250-15
5	2406	99.9	449	11	US-09-843-250-35
6	2404	99.8	449	11	US-09-843-250-26
7	2403	99.8	449	11	US-09-843-250-33
8	2403	99.8	449	11	US-09-843-250-34
9	2403	99.8	449	11	US-09-843-250-59
10	2402	99.8	449	11	US-09-843-250-16
11	2401	99.7	449	11	US-09-843-250-58
12	2400	99.7	449	11	US-09-843-250-32
13	2397	99.5	449	11	US-09-843-250-17
14	2349	97.5	449	11	US-09-843-250-18
15	2321	96.4	449	11	US-09-843-250-19
					Sequence 36, Appl
					Sequence 2, Appl
					Sequence 14, Appl
					Sequence 15, Appl
					Sequence 35, Appl
					Sequence 26, Appl
					Sequence 33, Appl
					Sequence 34, Appl
					Sequence 59, Appl
					Sequence 16, Appl
					Sequence 58, Appl
					Sequence 32, Appl
					Sequence 17, Appl
					Sequence 18, Appl
					Sequence 19, Appl

16	2295	95.3	449	11	US-09-843-250-20	Sequence 20, Appl
17	2222	92.3	449	11	US-09-843-250-21	Sequence 21, Appl
18	2192	91.0	447	11	US-09-843-250-22	Sequence 22, Appl
19	2055	85.3	447	11	US-09-843-250-23	Sequence 23, Appl
20	1971.5	81.9	451	11	US-09-843-250-24	Sequence 24, Appl
21	737	30.6	453	9	US-09-815-242-10253	Sequence 10253, A
22	377	15.7	490	10	US-09-738-626-6140	Sequence 6140, Ap
23	376.5	15.6	385	9	US-09-815-242-11692	Sequence 11692, A
24	341.5	14.2	424	9	US-09-815-243-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
38	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	107.5	4.5	951	10	US-09-924-097-15	Sequence 15, Appl
44	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
45	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl

#### ALIGNMENTS

#### RESULT 1

US-09-843-250-36  
; Sequence 36, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875, 006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 36  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.  
US-09-843-250-36

Query Match 100.0%; Score 2408; DB 11; Length 449;  
Best Local Similarity 100.0%; Pred. No. 1.9e-226;  
Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MYNKKILVSEGLSQKHLIHGDEELFQHEKLTIFARNWLFTHDSLTPAGDYVTAKWG 60  
DB 1 MYNKKILVSEGLSQKHLIHGDEELFQHEKLTIFARNWLFTHDSLTPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSTAFILNVCRRHGKTLVSEAGNAKGFVCSYHGWGFGSNGELQSPFFE 120  
DB 61 IDEVIVSRQNDGSTAFILNVCRRHGKTLVSEAGNAKGFVCSYHGWGFGSNGELQSPFFE 120

QY 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
DB 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
QY 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASONGKCYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASONGKCYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTLTKTDR 449

## RESULT 2

US-09-843-250-2  
; Sequence 2, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1  
US-09-843-250-2

Query Match 100.0%; Score 2407; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRONDGSIKGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
DB 61 IDEVIVSRONDGSIKGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
QY 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
DB 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
QY 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASONGKCYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASONGKCYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTLTKTDR 449

## RESULT 3

US-09-843-250-14  
; Sequence 14, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 14  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.  
US-09-843-250-14

Query Match 100.0%; Score 2407; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRONDGSIKGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 120  
DB 61 IDEVIVSRONDGSIKGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 120  
QY 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
DB 121 KOLYGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPWFHSGGL 180  
QY 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPPEKVKVIAKWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSVGHSDADLPVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASONGKCYQSRDSDLLSNLGFGEVDYGVDAVPGVVGKSAIGETSYRGFYRAY 420



Db 361 DDNDNMETASQNGKKYQSRDSDLLSLGFGEDVYDAVYGVVGSAGTGYRGTFRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTCTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTCTTDR 449

## RESULT 4

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.

US-09-843-250-15  
Query Match 100.0%; Score 2407; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.4e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSSGSLSQKHLHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKMG 60  
Db 1 MNYNNKILVSSGSLSQKHLHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVYAKMG 60  
QY 61 IDEVIVSRQNDGSTRAPFLNVCRRHGTILVSVAGNAKGFVCSYHGWFGSGNGELQSVFPE 120  
Db 61 IDEVIVSRQNDGSTRAPFLNVCRRHGTILVSVAGNAKGFVCSYHGWFGSGNGELQSVFPE 120  
QY 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYCGFDOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
Db 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYCGFDOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVVIVKANWKAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVVIVKANWKAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLWDGYSGVHSADLVPFLMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLWDGYSGVHSADLVPFLMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMDPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMDPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSLGFGEDVYDAVYGVVGSAGTGYRGTFRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSLGFGEDVYDAVYGVVGSAGTGYRGTFRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTCTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTCTTDR 449

## RESULT 5

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the

; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; CURRENT FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 26  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas sp.  
 ; US-09-843-250-26

Query Match 99.8%; Score 2404; DB 11; Length 449;  
 Best Local Similarity 99.8%; Pred. No. 4.7e-226;  
 Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MNNKILVSEGLSQKHLIHGBELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
 Db 1 MNNKILVSEGLSQKHLIHGBELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
 QY 61 IDEVIVSRONDGSIKRAFLNVCVRHKGKTLVSVAGNAKGVCVSYHGMGFGSGNGELQSVVPE 120  
 Db 61 IDEVIVSRONDGSIKRAFLNVCVRHKGKTLVSVAGNAKGVCVSYHGMGFGSGNGELQSVVPE 120  
 QY 121 KDLVGBSLNKKCLGLKEVARVSEFHGFIYCGFQDQAPPLMDYLGDAAWYLRPMFKHSGGL 180  
 Db 121 KDLVGBSLNKKCLGLKEVARVSEFHGFIYCGFQDQAPPLMDYLGDAAWYLRPMFKHSGGL 180  
 QY 181 ELVGPCKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 Db 181 ELVGPCKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKOERLNKEIGDVARIYRSHLNCV 300  
 Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKOERLNKEIGDVARIYRSHLNCV 300  
 QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
 Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
 QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVKGSAIGETSYRGFYRAY 420  
 Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVKGSAIGETSYRGFYRAY 420  
 QY 421 QAHVSSNNWAEFEHASSSTWHTLTKTDDR 449  
 Db 421 QAHVSSNNWAEFEHASSSTWHTLTKTDDR 449

## RESULT 7

US-09-843-250-33  
 ; Sequence 33, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Parales, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; CURRENT FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 33  
 ; LENGTH: 449

; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.  
 ; US-09-843-250-33

Query Match 99.8%; Score 2403; DB 11; Length 449;  
 Best Local Similarity 99.8%; Pred. No. 5.9e-226;  
 Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MNNKILVSEGLSQKHLIHGBELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
 Db 1 MNNKILVSEGLSQKHLIHGBELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
 QY 61 IDEVIVSRONDGSIKRAFLNVCVRHKGKTLVSVAGNAKGVCVSYHGMGFGSGNGELQSVVPE 120  
 Db 61 IDEVIVSRONDGSIKRAFLNVCVRHKGKTLVSVAGNAKGVCVSYHGMGFGSGNGELQSVVPE 120  
 QY 121 KDLVGBSLNKKCLGLKEVARVSEFHGFIYCGFQDQAPPLMDYLGDAAWYLRPMFKHSGGL 180  
 Db 121 KDLVGBSLNKKCLGLKEVARVSEFHGFIYCGFQDQAPPLMDYLGDAAWYLRPMFKHSGGL 180  
 QY 181 ELVGPCKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 Db 181 ELVGPCKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 QY 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKOERLNKEIGDVARIYRSHLNCV 300  
 Db 241 QMTSKYSGMGVLDGYSGVHSADLVPELMAFGAKOERLNKEIGDVARIYRSHLNCV 300  
 QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
 Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
 QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVKGSAIGETSYRGFYRAY 420  
 Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVKGSAIGETSYRGFYRAY 420  
 QY 421 QAHVSSNNWAEFEHASSSTWHTLTKTDDR 449  
 Db 421 QAHVSSNNWAEFEHASSSTWHTLTKTDDR 449

## RESULT 8

US-09-843-250-34  
 ; Sequence 34, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Parales, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; CURRENT FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 34  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.  
 ; US-09-843-250-34

Query Match 99.8%; Score 2403; DB 11; Length 449;  
 Best Local Similarity 99.8%; Pred. No. 5.9e-226;  
 Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHASADLVPELMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLDGYSVGHASADLVPELMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTELTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTELTKTTDR 449

## RESULT 9

US-09-843-250-59  
; Sequence 59, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 59  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.  
US-09-843-250-59

Query Match 99.8%; Score 2403; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 5.9e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120

QY 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHASADLVPELMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLDGYSVGHASADLVPELMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKOMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASONGKQYQSRDSDLLSNLGFGEVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTELTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTWHTELTKTTDR 449

## RESULT 10

US-09-843-250-16  
; Sequence 16, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 16  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.8%; Score 2402; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 7.4e-226;  
Matches 447; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIFARNWLFTHDSLIPAGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVKAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVVIIKANWKAPEAFNVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHASADLVPELMAFGAKOERLNKEIGDVRARIYRSHLNTV 300

Db 241 QMTSKYSGMGLWDGYSVHSDLPVLMFAGAKQERLNKEIGDVRARIYRSHLNTV 300  
Qy 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Qy 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

## RESULT 11

US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.  
US-09-843-250-58

Query Match 99.7%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 9.3e-226; Indels 0; Gaps 0;  
Matches 448; Conservative 0; Mismatches 1;  
Qy 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNMLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNMLFLTHDSLIPAPGDYVTAKMG 60  
Qy 61 IDEVIVSRQDGSIRAFINVCRRHGTILSVBAGNAKGFVCSYHGVGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFINVCRRHGTILSVBAGNAKGFVCSYHGVGFGSNGELQSVPE 120  
Qy 121 KOLYGESLNNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDAAWYLEPMFKHSGGL 180  
Db 121 KOLYGESLNNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDAAWYLEPMFKHSGGL 180  
Qy 181 ELVGPCKVVIKANWKAPEAFNVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPCKVVIKANWKAPEAFNVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
Qy 241 QMTSKYSGMGLWDGYSVHSDLPVLMFAGAKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLPVLMFAGAKQERLNKEIGDVRARIYRSHLNTV 300  
Qy 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Qy 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420

Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

## RESULT 12

US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match 99.7%; Score 2400; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.2e-225; Indels 0; Gaps 0;  
Matches 448; Conservative 0; Mismatches 1;  
Qy 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNMLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNMLFLTHDSLIPAPGDYVTAKMG 60  
Qy 61 IDEVIVSRQDGSIRAFINVCRRHGTILSVBAGNAKGFVCSYHGVGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFINVCRRHGTILSVBAGNAKGFVCSYHGVGFGSNGELQSVPE 120  
Qy 121 KOLYGESLNNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDAAWYLEPMFKHSGGL 180  
Db 121 KOLYGESLNNKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLDAAWYLEPMFKHSGGL 180  
Qy 181 ELVGPCKVVIKANWKAPEAFNVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPCKVVIKANWKAPEAFNVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
Qy 241 QMTSKYSGMGLWDGYSVHSDLPVLMFAGAKQERLNKEIGDVRARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLPVLMFAGAKQERLNKEIGDVRARIYRSHLNTV 300  
Qy 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVKVNPIIDANTTEVMTVAIVKOMPEDLKRRLADSVQRTIGPAGFWES 360  
Qy 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGVKSAIGETSYRGFYRAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTKTDDR 449

## RESULT 13

US-09-843-250-17

; Sequence 17, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Perales, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; PRIOR FILING DATE: 2001-04-26  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 17  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:6.  
 US-09-843-250-17

Query Match 99.5%; Score 2397; DB 11; Length 449;  
 Best Local Similarity 99.3%; Pred. No. 2.3e-225;  
 Matches 446; Conservative 2; Mismatches 1; Indels 0; Gaps 0;  
 QY 1 MNNKLLVSESGLSQKHLHGDEELFOHELKTIFFARNWLFTHDSLIPAPGDYVYAKMG 60  
 Db 1 MNNKLLVSESGLSQKHLHGDEELFOHELKTIFFARNWLFTHDSLIPAPGDYVYAKMG 60  
 QY 61 IDEVIVSRQDGSIRAFINVCRRHCKTLVSVEAGNAKGFVCSYHGWFGSGNGLQSVPE 120  
 Db 61 IDEVIVSRQDGSIRAFINVCRRHCKTLVSVEAGNAKGFVCSYHGWFGSGNGLQSVPE 120  
 QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
 Db 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
 QY 181 ELVGPFGKVKIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 Db 181 ELVGPFGKVKIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 QY 241 QMTSKYSGMGVLDGYSGVHSDLVPELMAFGGAQKQRLNKEIGDVRARIYRSHLNTV 300  
 Db 241 QMTSKYSGMGVLDGYSGVHSDLVPELMAFGGAQKQRLNKEIGDVRARIYRSHLNTV 300  
 QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPAFWES 360  
 Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPAFWES 360  
 QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGVAVPGVVKSAIGETSYRGFYRAY 420  
 Db 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGVAVPGVVKSAIGETSYRGFYRAY 420  
 QY 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449  
 Db 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449

RESULT 14  
 US-09-843-250-18  
 ; Sequence 18, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Perales, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2

; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; CURRENT FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 18  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Artificial Sequence  
 ; FEATURE:  
 ; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.  
 US-09-843-250-18

Query Match 97.5%; Score 2349; DB 11; Length 449;  
 Best Local Similarity 96.7%; Pred. No. 1.1e-220;  
 Matches 434; Conservative 11; Mismatches 4; Indels 0; Gaps 0;  
 QY 1 MNNKLLVSESGLSQKHLHGDEELFOHELKTIFFARNWLFTHDSLIPAPGDYVYAKMG 60  
 Db 1 MNNKLLVSESGLSQKHLHGDEELFOHELKTIFFARNWLFTHDSLIPAPGDYVYAKMG 60  
 QY 61 IDEVIVSRQDGSIRAFINVCRRHCKTLVSVEAGNAKGFVCSYHGWFGSGNGLQSVPE 120  
 Db 61 IDEVIVSRQDGSIRAFINVCRRHCKTLVSVEAGNAKGFVCSYHGWFGSGNGLQSVPE 120  
 QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
 Db 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
 QY 181 ELVGPFGKVKIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 Db 181 ELVGPFGKVKIKANWKAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
 QY 241 QMTSKYSGMGVLDGYSGVHSDLVPELMAFGGAQKQRLNKEIGDVRARIYRSHLNTV 300  
 Db 241 QMTSKYSGMGVLDGYSGVHSDLVPELMAFGGAQKQRLNKEIGDVRARIYRSHLNTV 300  
 QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPAFWES 360  
 Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPAFWES 360  
 QY 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGVAVPGVVKSAIGETSYRGFYRAY 420  
 Db 361 DDNDNMETASQNGKQYQSRDSDLLSNLGFGEVDYGVAVPGVVKSAIGETSYRGFYRAY 420  
 QY 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449  
 Db 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449

RESULT 15  
 US-09-843-250-19  
 ; Sequence 19, Application US/09843250  
 ; Publication No. US20030022335A1  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Perales, R.  
 ; APPLICANT: Gibson, D.  
 ; APPLICANT: Resnick, S.  
 ; APPLICANT: Lee, K.  
 ; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
 ; FILE REFERENCE: 875.006US2  
 ; CURRENT APPLICATION NUMBER: US/09/843,250  
 ; CURRENT FILING DATE: 2001-04-26  
 ; PRIOR APPLICATION NUMBER: PCT/US99/25079  
 ; PRIOR FILING DATE: 1999-10-26  
 ; PRIOR APPLICATION NUMBER: US 60/105,575  
 ; PRIOR FILING DATE: 1998-10-26  
 ; NUMBER OF SEQ ID NOS: 65  
 ; SOFTWARE: FastSeq for Windows Version 4.0  
 ; SEQ ID NO 19

```
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: Xaa = any amino acid.
US-09-843-250-19

Query Match          96.4%; Score 2321; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 6.1e-218;
Matches 429; Conservative 13; Mismatches 7; Indels 0; Gaps 0;

QY 1 MNYNKKILVSEGLSQKHLIHGDEELFQHELKTIIFARNWLELTHDSLIPAPGDYVTAKMG 60
Db 1 MNYNKKILVSEGLTQKHLIHGDEELFQHELRTIXARNWLELTHDSLIPSPGDYVTAKMG 60

QY 61 IDEVIYSRQNDGSIIRAFPLNVCRRHGKTLVSVENAGNAGFVCSYHGMFGSGNGELQSVPE 120
Db 61 IDEVIYSRQSDGSIIRAFPLNVCRRHGKTLVNAEAGNAGFVCSYHGMFGSGNGELQSVPE 120

QY 121 KOLYGESLANKKCLGLKAEVARVESFHGFIYGCDFQEPAPPLMDYLGDAAWYLEPMPKHSGL 180
Db 121 KELYGESLANKKCLGLKAEVARVESFHGFIYGCDFQEPAPSLMDYLGDAAWYLEPFPKHSGL 180

QY 181 ELVGPFGKVVIKANWKAPAENFVGDAHYHVGWTHASSLSRSGESIFFSSLAGNAALPPEGAGL 240
Db 181 ELVGPFGKVVIKANWKAPAENFVGDAHYHVGWTHASSLSRTGESIFFSSLAGNAVLPPEGAGL 240

QY 241 QMTSKYSGNGVLWDGYSVHSADLYPELWARGAKOERLNKEIGDVRIYRSHLNCV 300
Db 241 QMTSKYSGNGVLWDGYSVHSADLYPELWARGAKOERLNKEIGDVPARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIYEKMDPELKRRLADSVORTIGPAGFWES 360
Db 301 FPNNSVLTCGVFKVKNPIDANTTEVWTYAIYEKMDPELKRRLADAVORTVGPAGFWES 360

QY 361 DDNDNMETASQNGKTKQSRDSDLLSMLGFGEVDYGDVYPGVVGSAGIETSYRGFYRAY 420
Db 361 DDNDNMETASQNGKTKQSRDSDLLSMLGFGEVDYGDVYPGVVGSAGIETSYRGFYRAY 420

QY 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449
Db 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449
```

Search completed: December 9, 2003, 16:09:36  
Job time : 23.1429 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)  
3771.269 Million cell updates/sec

Title: US-09-843-250-26

Perfect score: 2410

Sequence: 1 MYNNKILVSEGLSQHLI.....AFPEHASTWHTLNTKTR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Published Applications AA.\*

- 1: /cgn2\_6/ptodata/1/pubpaa/US07\_PUBCOMB.pep.\*
- 2: /cgn2\_6/ptodata/1/pubpaa/PCT\_NEW\_PUB.pep.\*
- 3: /cgn2\_6/ptodata/1/pubpaa/US06\_NEW\_PUB.pep.\*
- 4: /cgn2\_6/ptodata/1/pubpaa/US06\_PUBCOMB.pep.\*
- 5: /cgn2\_6/ptodata/1/pubpaa/US07\_NEW\_PUB.pep.\*
- 6: /cgn2\_6/ptodata/1/pubpaa/PCTUS\_PUBCOMB.pep.\*
- 7: /cgn2\_6/ptodata/1/pubpaa/US08\_NEW\_PUB.pep.\*
- 8: /cgn2\_6/ptodata/1/pubpaa/US08\_PUBCOMB.pep.\*
- 9: /cgn2\_6/ptodata/1/pubpaa/US09A\_PUBCOMB.pep.\*
- 10: /cgn2\_6/ptodata/1/pubpaa/US09B\_PUBCOMB.pep.\*
- 11: /cgn2\_6/ptodata/1/pubpaa/US09C\_PUBCOMB.pep.\*
- 12: /cgn2\_6/ptodata/1/pubpaa/US09\_NEW\_PUB.pep.\*
- 13: /cgn2\_6/ptodata/1/pubpaa/US10A\_PUBCOMB.pep.\*
- 14: /cgn2\_6/ptodata/1/pubpaa/US10B\_PUBCOMB.pep.\*
- 15: /cgn2\_6/ptodata/1/pubpaa/US10C\_PUBCOMB.pep.\*
- 16: /cgn2\_6/ptodata/1/pubpaa/US10\_NEW\_PUB.pep.\*
- 17: /cgn2\_6/ptodata/1/pubpaa/US60\_NEW\_PUB.pep.\*
- 18: /cgn2\_6/ptodata/1/pubpaa/US60\_PUBCOMB.pep.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2410	100.0	449	11	US-09-843-250-26
2	2407	99.9	449	11	US-09-843-250-59
3	2405	99.8	449	11	US-09-843-250-58
4	2404	99.8	449	11	US-09-843-250-35
5	2404	99.8	449	11	US-09-843-250-36
6	2403	99.7	449	11	US-09-843-250-2
7	2403	99.7	449	11	US-09-843-250-14
8	2403	99.7	449	11	US-09-843-250-15
9	2402	99.7	449	11	US-09-843-250-33
10	2402	99.7	449	11	US-09-843-250-34
11	2401	99.6	449	11	US-09-843-250-32
12	2398	99.5	449	11	US-09-843-250-16
13	2393	99.3	449	11	US-09-843-250-17
14	2345	97.3	449	11	US-09-843-250-18
15	2317	96.1	449	11	US-09-843-250-19

Applicants

16	2291	95.1	449	11	US-09-843-250-20	Sequence 20, Appl
17	2218	92.0	449	11	US-09-843-250-21	Sequence 21, Appl
18	2198	90.8	447	11	US-09-843-250-22	Sequence 22, Appl
19	2051	85.1	447	11	US-09-843-250-23	Sequence 23, Appl
20	1967.5	81.6	451	11	US-09-843-250-24	Sequence 24, Appl
21	743	30.8	453	9	US-09-815-242-10253	Sequence 10253, A
22	383	15.9	490	10	US-09-738-626-6140	Sequence 6140, Ap
23	382.5	15.9	385	9	US-09-815-242-11692	Sequence 11692, A
24	337.5	14.0	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	113.5	4.7	951	10	US-09-924-097-15	Sequence 15, Appl
34	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
35	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
36	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
37	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
38	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
39	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
40	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
41	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
42	108	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
43	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
44	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
45	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl

ALIGNMENTS

RESULT 1

US-09-843-250-26  
; Sequence 26, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; FILE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 26  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Pseudomonas sp.  
US-09-843-250-26

Query Match 100.0%; Score 2410; DB 11; Length 449;  
Best Local Similarity 100.0%; Pred. No. 9.3e-227;  
Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MYNNKILVSEGLSQHLIHGDELFQHELTIFARNWLFTHDSLIPAGDYVTAKMG	60
Db	1	MYNNKILVSEGLSQHLIHGDELFQHELTIFARNWLFTHDSLIPAGDYVTAKMG	60
Qy	61	IDEVLSQNDGSTRAFNLNCRHGKTLVSEAGNAKGFVCSHGNGELQSVDFE	120
Db	61	IDEVLSQNDGSTRAFNLNCRHGKTLVSEAGNAKGFVCSHGNGELQSVDFE	120
Qy	121	KDLYGESLNKKCLGKKEVARVESFHGYGCFDQEPPLMDYLGDAAWLYLFMPFKSGGL	180

Db 121 KDLGSLNKKCLGLKEVARVESHFGIYGCDFQAPPLMDYLGDAAWLEPMFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
QY 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
Db 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449

## RESULT 2

US-09-843-250-59  
; Sequence 59, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 59  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.  
US-09-843-250-59

Query Match 99.9%; Score 2407; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.8e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDVYTAQMG 60  
Db 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDVYTAQMG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
QY 121 KDLGSLNKKCLGLKEVARVESHFGIYGCDFQAPPLMDYLGDAAWLEPMFKHSGGL 180  
Db 121 KDLGSLNKKCLGLKEVARVESHFGIYGCDFQAPPLMDYLGDAAWLEPMFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
QY 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300

Db 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
Db 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTIDR 449

## RESULT 3

US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.  
US-09-843-250-58

Query Match 99.8%; Score 2405; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 2.9e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDVYTAQMG 60  
Db 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDVYTAQMG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNELQSVPE 120  
QY 121 KDLGSLNKKCLGLKEVARVESHFGIYGCDFQAPPLMDYLGDAAWLEPMFKHSGGL 180  
Db 121 KDLGSLNKKCLGLKEVARVESHFGIYGCDFQAPPLMDYLGDAAWLEPMFKHSGGL 180  
QY 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPPGKVVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPGAGL 240  
QY 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDWGYSGVHSDLLVPELMAFGAKQERLNKEIGDVRAIYRSHLNCV 300  
QY 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
Db 301 FPNNMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASONGKQYQSRDSDLLSNLGFGEVDYGDVYGVGKSAIGETSYRGFYRAY 420



Qy 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449

## RESULT 4

US-09-843-250-35  
; Sequence 35, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paraless, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 35  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.  
US-09-843-250-35

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.6e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELTIFARNWLFTHDSLIPAGDYVTAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELTIFARNWLFTHDSLIPAGDYVTAKWG 60  
Qy 61 IDEVIVSRONDGSTRAFNLVCRHGKTLVSVBAGNAKGFVCSYHGWGFGSGELQSVPE 120  
Db 61 IDEVIVSRONDGSTRAFNLVCRHGKTLVSVBAGNAKGFVCSYHGWGFGSGELQSVPE 120  
Qy 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPMFKHSGGL 180  
Db 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPMFKHSGGL 180  
Qy 181 ELVGPFGKVIKANWKAPEAFNVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Qy 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Qy 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
Qy 361 DDNDNMETASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGSAGTSTYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGSAGTSTYRGFYRAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449

## RESULT 5

US-09-843-250-36  
; Sequence 36, Application US/09843250

Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paraless, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 36  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.  
US-09-843-250-36

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.6e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELTIFARNWLFTHDSLIPAGDYVTAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELTIFARNWLFTHDSLIPAGDYVTAKWG 60  
Qy 61 IDEVIVSRONDGSTRAFNLVCRHGKTLVSVBAGNAKGFVCSYHGWGFGSGELQSVPE 120  
Db 61 IDEVIVSRONDGSTRAFNLVCRHGKTLVSVBAGNAKGFVCSYHGWGFGSGELQSVPE 120  
Qy 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPMFKHSGGL 180  
Db 121 KOLYGESLNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAWYLEPMFKHSGGL 180  
Qy 181 ELVGPFGKVIKANWKAPEAFNVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Qy 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDGYSVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Qy 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
Qy 361 DDNDNMETASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGSAGTSTYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGSAGTSTYRGFYRAY 420  
Qy 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449  
Db 421 QAHVSSNNWAEFEHASTWHTLTXTDR 449

## RESULT 6

US-09-843-250-2  
; Sequence 2, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paraless, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250

; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 2  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1  
US-09-843-250-2

Query Match 99.7%; Score 2403; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 4.5e-226;  
Matches 448; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 MMYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MMYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSPVPE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSPVPE 120  
QY 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCPOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCPOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHSDLVPELMAFGGAKEERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSVGHSDLVPELMAFGGAKEERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCGVPKVNPDANTTEVTYAIIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
DB 301 FPNNSMLTCGVPKVNPDANTTEVTYAIIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMETASQNGKYSRDSLLSNLGFGEVDYGDVYGVVGSAGIETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKYSRDSLLSNLGFGEVDYGDVYGVVGSAGIETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEPRHASTTWHTELTKTDDR 449  
DB 421 QAHVSSSNWAEPRHASTTWHTELTKTDDR 449

RESULT 7  
US-09-843-250-14  
; Sequence 14, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 14  
; LENGTH: 449

; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.  
US-09-843-250-14

Query Match 99.7%; Score 2403; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 4.5e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MMYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
DB 1 MMYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSPVPE 120  
DB 61 IDEVIVSRQNDGSIIRAFNLVCRHRGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSPVPE 120  
QY 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCPOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
DB 121 KOLYGESLNKKCLGLKEVARVESPHGFIYGCPOEAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPFGKVIKANWKAPAEFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSVGHSDLVPELMAFGGAKEERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSVGHSDLVPELMAFGGAKEERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCGVPKVNPDANTTEVTYAIIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
DB 301 FPNNSMLTCGVPKVNPDANTTEVTYAIIVEKOMPEDLKRRLADSVQRTFGPAGFWES 360  
QY 361 DDNDNMETASQNGKYSRDSLLSNLGFGEVDYGDVYGVVGSAGIETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKYSRDSLLSNLGFGEVDYGDVYGVVGSAGIETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEPRHASTTWHTELTKTDDR 449  
DB 421 QAHVSSSNWAEPRHASTTWHTELTKTDDR 449

RESULT 8  
US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.  
US-09-843-250-15

Query Match 99.7%; Score 2403; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 4.5e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

```
QY 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
QY 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
Db 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
QY 241 QMTSKYSGSGVLDGYSVGHSAADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
Db 241 QMTSKYSGSGVLDGYSVGHSAADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVKOMPEDLKRRLADSVQRTGPAFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVKOMPEDLKRRLADSVQRTGPAFWES 360
QY 361 DDNDNMETASONGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGTETSIRGFYRAY 420
Db 361 DDNDNMETASONGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGTETSIRGFYRAY 420
QY 421 QAHVSSNNWABFEHASTWHTLTKTDR 449
Db 421 QAHVSSNNWABFEHASTWHTLTKTDR 449
```

## RESULT 9

```
US-09-843-250-33
; Sequence 33, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Perales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 33
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.
US-09-843-250-33
```

```
Query Match 99.7%; Score 2402; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 5.6e-226;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
```

```
QY 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
Db 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
QY 241 QMTSKYSGSGVLDGYSVGHSAADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
Db 241 QMTSKYSGSGVLDGYSVGHSAADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVKOMPEDLKRRLADSVQRTGPAFWES 360
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVKOMPEDLKRRLADSVQRTGPAFWES 360
QY 361 DDNDNMETASONGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGTETSIRGFYRAY 420
Db 361 DDNDNMETASONGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSAGTETSIRGFYRAY 420
QY 421 QAHVSSNNWABFEHASTWHTLTKTDR 449
Db 421 QAHVSSNNWABFEHASTWHTLTKTDR 449
```

## RESULT 10

```
US-09-843-250-34
; Sequence 34, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Perales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; PRIOR FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 34
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.
US-09-843-250-34
```

```
Query Match 99.7%; Score 2402; DB 11; Length 449;
Best Local Similarity 99.8%; Pred. No. 5.6e-226;
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;
```

```
QY 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
Db 1 MNNKILVSESGLSQKHLHGBELFOHELKTIFARNWFLTHDSLIPAPGDYVTAKMG 60
QY 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
Db 61 IDEVIVSRQNDGSTRAPLVNCRHRGKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120
QY 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
Db 121 KDLYGESLNKCLGLKEVARVESFHGFIYGCDFQDEAPPLMDYLGDAAYLEPMPFKHSGGL 180
QY 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
Db 181 ELVGPFGKVVIKANWKAPAENFVGDAYHVGVTHASSLSRSGESIFSSLAGNNAALPPEGAGL 240
QY 241 QMTSKYSGSGVLDGYSVGHSAADLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
```

Db 241 QMTSKYSGMGLWDGYSVHSDLVPELMAFGAKQERLNKEIGDVARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
QY 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
QY 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449  
Db 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449

## RESULT 11

US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralee, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Reenick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match 99.6%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 7.1e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGMGFGSNGELQSPVPE 120  
Db 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGMGFGSNGELQSPVPE 120  
QY 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPGRKVTIKANKKAPAEFVGDVYHVGWTHASSLRSGESIFSSLGNAALPPEGAGL 240  
Db 181 ELVGPGRKVTIKANKKAPAEFVGDVYHVGWTHASSLRSGESIFSSLGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLWDGYSVHSDLVPELMAFGAKQERLNKEIGDVARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLVPELMAFGAKQERLNKEIGDVARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
QY 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420

Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
QY 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449  
Db 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449

## RESULT 12

US-09-843-250-16  
; Sequence 16, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Paralee, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Reenick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 16  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.5%; Score 2398; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 1.4e-225;  
Matches 447; Conservative 0; Mismatches 2; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGMGFGSNGELQSPVPE 120  
Db 61 IDEVIVSRQNDGSTRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGMGFGSNGELQSPVPE 120  
QY 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
Db 121 KDLVGSLSNKKCLGLKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPGRKVTIKANKKAPAEFVGDVYHVGWTHASSLRSGESIFSSLGNAALPPEGAGL 240  
Db 181 ELVGPGRKVTIKANKKAPAEFVGDVYHVGWTHASSLRSGESIFSSLGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLWDGYSVHSDLVPELMAFGAKQERLNKEIGDVARIYRSHLNTV 300  
Db 241 QMTSKYSGMGLWDGYSVHSDLVPELMAFGAKQERLNKEIGDVARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMPEDLKRRLADSVQRTGPGAGFWES 360  
QY 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFGEVDYGDVYGVVGSKAIGETSYRGFYRAY 420  
QY 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449  
Db 421 QAHVSSNNAEFAHSSHTWHTLTKTDDR 449

RESULT 13  
US-09-843-250-17

```
; Sequence 17, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 17
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:6.
; US-09-843-250-17

Query Match          99.3%; Score 2393; DB 11; Length 449;
Best Local Similarity 99.3%; Pred. No. 4.3e-225;
Matches 446; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60
QY 61 IDEVIVSRONDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
DB 61 IDEVIVSRONDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
QY 121 KDLYGESLNKCKLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLYGESLNKCKLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPEKVVVKANWKAPEAFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPPEKVVVKANWKAPEAFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSVHSDLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVHSDLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVMTYAIVEKMPEDLKRLADSVQRTFGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVMTYAIVEKMPEDLKRLADSVQRTFGPAGFWES 360
QY 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFEDYVDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFEDYVDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449
DB 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449

RESULT 14
US-09-843-250-18
; Sequence 18, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2

; Sequence 19, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19
```

```
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 18
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.
; US-09-843-250-18

Query Match          97.3%; Score 2345; DB 11; Length 449;
Best Local Similarity 96.7%; Pred. No. 2.1e-220;
Matches 434; Conservative 10; Mismatches 5; Indels 0; Gaps 0;

QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60
QY 61 IDEVIVSRONDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
DB 61 IDEVIVSRONDGSIIRAFNLVCRHRGKTLVSVAGNAKGFVCSYHGWGFGSGNGELQSVPE 120
QY 121 KDLYGESLNKCKLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
DB 121 KDLYGESLNKCKLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180
QY 181 ELVGPPEKVVVKANWKAPEAFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
DB 181 ELVGPPEKVVVKANWKAPEAFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
QY 241 QMTSKYSGMGVLDGYSVHSDLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
DB 241 QMTSKYSGMGVLDGYSVHSDLVPELMAFGAKQERLNKEIGDVRIYRSHLNCV 300
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVMTYAIVEKMPEDLKRLADSVQRTFGPAGFWES 360
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVMTYAIVEKMPEDLKRLADSVQRTFGPAGFWES 360
QY 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFEDYVDVYGVVGVKSAIGETSYRGFYRAY 420
DB 361 DDNDNMETASQNGKQKQSRDSDLLSNLGFEDYVDVYGVVGVKSAIGETSYRGFYRAY 420
QY 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449
DB 421 QAHVSSSNWAEFPHASSTWHTLTCTTDR 449

RESULT 15
US-09-843-250-19
; Sequence 19, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875.006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 19
```

```
; LENGTH: 449
; TYPE: ERT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.
; NAME/KEY: SITE
; LOCATION: (35)...(35)
; OTHER INFORMATION: Xaa = any amino acid.
US-09-843-250-19

Query Match          96.1%; Score 2317; DB 11; Length 449;
Best Local Similarity 95.5%; Pred. No. 1.2e-217;
Matches 429; Conservative 12; Mismatches 8; Indels 0; Gaps 0;

QY 1 MNYNKKILVSESGLSQKHLHGDEELFOHEKLTIPARNWLFTHDSLIPAPGDYVTAKWG 60
Db 1 MNYNKKILVSESGLTQKHLHGDEELFOHEKLTIPARNWLFTHDSLIPSPGDYVTAKWG 60

QY 61 IDEVIVSRQDGSIRAFINVCRRHGKTLNVEAGNAKGFVCSYHGMFGSNGELQSVPE 120
Db 61 IDEVIVSRQDGSIRAFINVCRRHGKTLNVEAGNAKGFVCSYHGMFGSNGELQSVPE 120

QY 121 KELYGESLNKCKLGLKEVARVESPHGYICFDOEAPPLMDYLGDAAWYLEPWFHSGGL 180
Db 121 KELYGESLNKCKLGLKEVARVESPHGYICFDOEAPPLMDYLGDAAWYLEPWFHSGGL 180

QY 181 ELVGPFGKVIKANWKAPAEKFNVDGVHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240
Db 181 ELVGPFGKVIKANWKAPAEKFNVDGVHGVGTHASSLSRSGESIFSSLAGNAALPPEGAGL 240

QY 241 QMTSKYSGMGVLWDGYSGVHSADLVPDLMAFGSAKQERLNKEIGDVRARIYRSHLNCVY 300
Db 241 QMTSKYSGMGVLWDGYSGVHSADLVPDLMAFGSAKQERLNKEIGDVRARIYRSHLNCVY 300

QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRLADSVORTFGPAGFWES 360
Db 301 FPNNSVLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRLADAVQRTVGPAGFWES 360

QY 361 DDNDNMETASQNGKKYQSRDLSNLGFCGEDVVGDAVYGVGVKSAIGETSYRGFYRAY 420
Db 361 DDNDNMETASQNGKKYQSRDLSNLGFCGEDVVGDAVYGVGVKSAIGETSYRGFYRAY 420

QY 421 QARVSSNNWAEFEHASSTWHTLTKTTDR 449
Db 421 QARVSSNNWAEFEHASSTWHTLTKTTDR 449
```

Search completed: December 9, 2003, 16:09:31  
Job time : 23.1429 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:13 ; Search time 11.8571 Seconds  
(without alignments)  
1602.205 Million cell updates/sec

Title: US-09-843-250-26

Perfect score: 2410

Sequence: 1 MNYNNKILNSESGLSOKHLI.....APEFHASSTWHTLTKTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 328717 seqs, 42310858 residues

Total number of hits satisfying chosen parameters: 328717

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : Issued Patents AA:\*

1: /cgn2\_6/ptodata/1/iaa/5A COMB.pdp.\*  
2: /cgn2\_6/ptodata/1/iaa/5B COMB.pdp.\*  
3: /cgn2\_6/ptodata/1/iaa/6A COMB.pdp.\*  
4: /cgn2\_6/ptodata/1/iaa/6B COMB.pdp.\*  
5: /cgn2\_6/ptodata/1/iaa/PCUS COMB.pdp.\*  
6: /cgn2\_6/ptodata/1/iaa/backfiles.pdp.\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

# SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	415.5	17.2	463	4	US-09-252-991A-31367
2	412.5	17.1	496	4	US-09-328-352-6452
3	390.5	16.2	466	4	US-09-328-352-6452
4	389	16.1	445	4	US-09-328-352-7248
5	364	15.1	471	4	US-09-328-352-7581
6	345.5	14.3	425	4	US-09-328-352-7581
7	292	12.1	449	4	US-09-328-352-7581
8	279.5	11.6	375	4	US-09-328-352-7581
9	237.5	9.9	528	4	US-09-328-352-7581
10	224	9.3	446	4	US-09-328-352-7581
11	223	9.3	439	4	US-09-328-352-7581
12	185	7.7	35	3	US-08-810-009-19
13	174	7.2	35	3	US-08-810-009-20
14	168	7.0	35	3	US-08-810-009-21
15	143.5	6.0	629	4	US-09-328-352-7581
16	128	5.3	332	4	US-09-328-352-7581
17	118.5	4.9	354	4	US-08-376-063E-4
18	116.5	4.8	379	3	US-09-328-352-7581
19	110	4.6	35	3	US-08-810-009-12
20	109	4.5	35	3	US-08-810-009-13
21	108	4.5	35	3	US-08-810-009-14
22	108	4.5	35	3	US-08-810-009-15
23	108	4.5	622	4	US-09-311-626E-4
24	106	4.4	35	3	US-08-810-009-9
25	106	4.4	364	4	US-09-328-352-4956
26	104	4.3	35	3	US-08-810-009-18
27	103.5	4.3	432	3	US-08-809-326A-16

## ALIGNMENTS

### RESULT 1

US-09-252-991A-31367

; Sequence 31367, Application US/09252991A

; Patent No. 6551795

; GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.

; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS

; FILE REFERENCE: 107196.136

; CURRENT APPLICATION NUMBER: US/09/252,991A

; PRIOR FILING DATE: 1999-02-18

; PRIOR APPLICATION NUMBER: US 60/074,788

; PRIOR FILING DATE: 1998-02-18

; PRIOR APPLICATION NUMBER: US 60/094,190

; PRIOR FILING DATE: 1998-07-27

; NUMBER OF SEQ ID NOS: 33142

; SEQ ID NO 31367

; LENGTH: 463

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-31367

Query Match 17.2%; Score 415.5; DB 4; Length 463;  
Best Local Similarity 29.3%; Pred. No. 4.3e-31;  
Matches 111; Conservative 69; Mismatches 148; Indels 51; Gaps 17;

QY	23	DEELFOHKLKTFARNWLFTHDSLPAPGVVTKMGIDEVIVSRQNDSSIRAPLNVCR	82
DB	38	DEPLFELEKHLFEGNWNVLHESQVAGVNDYLTQIGRQISIVTARNRDGQNLAFINACS	97
QY	83	HRGKTLVSVBAGNAKGFVCSYHGMGFGSGNGLQSV--PFKDLXGESLNKCLG---LKE	137
DB	98	HRGAMLCRHKGNSSYTCFPHGWTFFNNSGKLLKVDPAEAG-YFQGFN--CEGSHDLTR	154
QY	138	VARVESFPGFYGFCDQAPPLMDYLGDAAWVLPMPKHS--GGLELVGPPKVKIVKANWK	196
DB	155	VARFESYRGLFGLSINPDVRLAEHLGESAKIIDMVDQSPGSLVLEVLGSSSYVEGNWK	214
QY	197	APAEFVGDYHVG---WTHASS-----LRSGESIFSLAGNALPPEGAGIQ	241
DB	215	LTAEN-GADGHVSVVHNYAATOSQORQDAADPLRT-----MSAAGWAR---QGGGFY	265
QY	242	MTSKYSGMGVLDYGVSGVHSADLVPE-LMAFGGAQKQERLNKEICDVRAAR-IYRSHLNCT	299
DB	266	---SFEHGHMLLWRWAN-----PEDRPAP--ERRAELARDFGEARADWMIENSRLIC	313
QY	300	VFPNNMML-TCSGVFKVKNPIDANTTEVTVTAIVKEMPEDLKRLADSVQRTTGPAGFW	358
DB	314	LYPNVYLMQDPSQIRIARPLSVDRTEITTYCIAPKGESAEARARRIRQVEDFENVSGMA	373

Sequence 16, Appl  
Sequence 16, Appl  
Sequence 15, Appl  
Sequence 15, Appl  
Sequence 15, Appl  
Sequence 15, Appl  
Sequence 15, Appl  
Sequence 11, Appl  
Sequence 8, Appl  
Sequence 10, Appl  
Sequence 44, Appl  
Sequence 45, Appl  
Sequence 5961, Ap  
Sequence 17, Appl  
Sequence 57, Appl  
Sequence 466, App  
Sequence 28371, A  
Sequence 46, Appl

28 103.5 4.3 432 4 US-09-689-914A-16  
29 103.5 4.3 432 4 US-09-689-913A-16  
30 103.5 4.3 432 4 US-09-689-916A-16  
31 103.5 4.3 649 3 US-08-809-326A-15  
32 103.5 4.3 649 4 US-09-689-914A-15  
33 103.5 4.3 649 4 US-09-689-913A-15  
34 103.5 4.3 649 4 US-09-689-916A-15  
35 103 4.3 35 3 US-08-810-009-11  
36 102 4.2 35 3 US-08-810-009-8  
37 102 4.2 35 3 US-08-810-009-10  
38 101 4.2 17 3 US-08-810-009-44  
39 101 4.2 17 3 US-08-810-009-45  
40 100.5 4.2 363 4 US-09-328-352-5961  
41 100 4.1 35 3 US-08-810-009-17  
42 99.5 4.1 256 4 US-09-325-932A-57  
43 99 4.1 1132 4 US-09-198-452A-466  
44 97.5 4.0 395 4 US-09-252-991A-28371  
45 95 3.9 17 3 US-08-810-009-46

QY 359 ESDNDNMETASQNGKKY 377  
 Db 374 TPDDLBEFRSCQGG---YQ 389

## RESULT 2

US-09-328-352-6452  
 ; Sequence 6452, Application US/09328352  
 ; Patent No. 6562958

## GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252

; SEQ ID NO 6452

; LENGTH: 496

; TYPE: PRT

; ORGANISM: Acinetobacter baumannii

US-09-328-352-6452

Query Match 17.1%; Score 412.5; DB 4; Length 496;  
 Best Local Similarity 30.8%; Pred. No. 9.2e-31;  
 Matches 112; Conservative 62; Mismatches 163; Indels 27; Gaps 15;

QY 23 DEELFQHELKTI FARNWLFTHDSLIPAPGDIYVTAQMGIDEVIVSRQNDGSI RFLNVC R 82  
 Db 73 DEALFDELMKYL IPEGWVLYLAHESQIPNNNDYTYTIGRQPIIAERNRNGELNAMINAGS 132

QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPEKDL-YGESLNKK-CLGLKEVAR 140  
 Db 133 HRGAQLCRYKRGKNKATYTCFFHGTWYNSGLKLKVDPTDAGSDCFNQDGHDLKVAR 192

QY 141 VESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKH-SGGLVLPVGPVKVVIKANWKA 199  
 Db 193 FESYKGFGLFGLNPDVPSLEFLGTTKIIDMIVDQSEHGLEVLRSSTVYEGNWKLT A 252

QY 200 ENFVGDYHVG---WTHASSLRSGESIFSSLAGNAALPPEGA-GLQMTSKY--SGMGVL 253  
 Db 253 EN-GADYHVSVAHWNYATQHRKB--TOADNIRAMSAGSWGKQGGSGYGFENGHML 309

QY 254 WDCYSGVHSGADLPMLMAFGAKQERLNKEIGDVRAR--IYRSHLNTCTVFPNNMMLTCSG 311  
 Db 310 WTCWNPEDRPNEF-----KADEVTEKYGEAMSKWMLERS-NLCYFNVYLMDDQFG 360

QY 312 -VFKVNPIDANTVETWYVAIVEK-DMPDLKRLADSVQRTFGPAGFWESDDNMETA 369  
 Db 361 SQIRVLRLPLSVNRTVITYCIAPKGAPARARRIR-QYEDFFNAGSMATPDDLBEFR-A 418

QY 370 SQNG 373  
 Db 419 CQAG 422

## RESULT 3

US-09-252-991A-31385  
 ; Sequence 31385, Application US/09252991A  
 ; Patent No. 6551795

## GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136  
 ; CURRENT APPLICATION NUMBER: US/09/252,991A  
 ; CURRENT FILING DATE: 1999-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/074,788  
 ; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 31385

; LENGTH: 466

; TYPE: PRT

; ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-31385

Query Match 16.2%; Score 390.5; DB 4; Length 466;  
 Best Local Similarity 27.4%; Pred. No. 1e-28;  
 Matches 121; Conservative 77; Mismatches 181; Indels 63; Gaps 18;

QY 23 DEELFQHELKTI FARNWLFTHDSLIPAPGDIYVTAQMGIDEVIVSRQNDGSI RFLNVC R 82  
 Db 39 EPFLFDELMELIFEKWYIACHESLARPHDFTVTLRAGRQPLVTRDNGQLHALVDAQ 98

QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSV--PFEKDLYESLNKKCLGLKEVAR 140  
 Db 99 HRGATLVVRGKGNOSTFTCPFHAMCYKNDGRLVKYKAFGE---YPEGDFKATRGKLR-AR 154

QY 141 VESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKH--SGGLELVGPVKVVIKANWKA 197  
 Db 155 IQSYRGFFVSLDVAGEDDLVDPLGDARVFLDMLVAQSPSGELEVLPGTSTTYTEGNWL 214

QY 198 PAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPEGAGLQMT---SKYSGMGVL- 253  
 Db 215 QWENGL-DGYHVTSTVYNYV-----ATVQHRQOQVEAERGVAATLDYSKLGAGDAATD 266

QY 254 --WDCYSGVHS-----ADLPMLMAFGAKQERLNKEIGDVRARIYRSHL 296  
 Db 267 DGMFSFANGSHVLFSEMPNPAVRFGYASVMPRLVA-----EYQARAEWMMHRL 315

QY 297 -NCTVFPNNMML-TCSGVFKVNPIDANTVETWYVAI-VEKDMPEDLKRLADSVQRTFG 353  
 Db 316 ENLNLVPSLFDIQISSQLRIVRPLANNRTEIVSQCTGVKESDADRENRR-QPEDFPN 374

QY 354 PAGFWESDDNMETASONGKYSRDSDDLNSNGFEDVYGDVAVYPGVWKSAL---GE 410  
 Db 375 VSGMGTPDDLVEFREAQRGFQARLERNSDI--SRGHGKWLGEATPNSQALGIAPLLTGT 432

QY 411 TSYRGFYRAYCAHVSSSNWAEF 432  
 Db 433 ITHGELYVNHQAH-----WRRF 449

## RESULT 4

US-09-328-352-7248  
 ; Sequence 7248, Application US/09328352  
 ; Patent No. 6562958

## GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; TITLE OF INVENTION: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252

; SEQ ID NO 7248

; LENGTH: 445

; TYPE: PRT

; ORGANISM: Acinetobacter baumannii

US-09-328-352-7248

Query Match 16.1%; Score 388; DB 4; Length 445;  
 Best Local Similarity 28.1%; Pred. No. 1.7e-28;  
 Matches 124; Conservative 66; Mismatches 164; Indels 88; Gaps 21;

QY 20 IHGDEELFQHELKTI FARNWLFTHDSLIPAPGDIYVTAQMGIDEVIVSRQNDGSI RFLN 79  
 Db 47 LYKDERIFDEMEKIFYSTWVAHAASEIPEGGSYKTNIGKQPVVVVDRKKKHVLLN 106

QY 80 VCHRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPEKDLYESLNKKCLGLKEVA 139  
 Db 107 RCRHRAATVCEHKKGTNSFCVPHGWSYALDGLRGVP-SPESYGDCLDLSPLVSL- 164

QY 140 RVSEFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGG--LELVGP-----PGKVVIK 192



Db 165 RVEEYNGMIFASFKEDIQLEEFGLPAKWKIDLFMKQAGYPIKVLGEHRFRFPG-----219  
 QY 193 ANWKAPAEFVGDYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGLQWTSKYGS 248  
 Db 220 -NWKIQLEN-TTDAIHPFLVHKSFLSSVDKTESLEN-----PEN 257  
 QY 249 GMGLVMDYSGVHSADLVPELMFAGGAKQBR-LNKEIGDVR-----ARIYR- 293  
 Db 258 QPGFVEDLGNHGSVMVMIPELVDEEDLMERPQIERFEDLAQALRDEGHELEVRIVRA 317  
 QY 294 ---SHLACTVPPNNSMLTCS-GYFKVWNPIDANTTEVWTVAIVEKO---MPEDLKERRLA 345  
 Db 318 VGGSGFNLNFPN---TACSWAFPRVLQPSVAETEI-HHSVITMDGGPOIAQYRLRLH 373  
 QY 346 DSVQRTFGPAGFWBESDDNMETASONGKXQSRDSDLLSNLGFGEVDYGDVYGVVG- 404  
 Db 374 EHQ---GPGFGTDPDSEAWERY-QHGAN-AGNDLWIMLNRGL-----PGEVKT 418  
 QY 405 ----KSAI-GETSYRGFYRAYQ 421  
 Db 419 EDGLKSDVSAETGNRAAYQWQK 440

## RESULT 5

US-09-328-352-7581  
 ; Sequence 7581, Application US/09328352  
 ; Patent No. 6562958  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE REFERENCES: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; CURRENT APPLICATION NUMBER: GTC99-03PA  
 ; PRIOR FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252  
 ; SEQ ID NO 7581  
 ; LENGTH: 471  
 ; TYPE: PRT  
 ; ORGANISM: Acinetobacter baumannii  
 US-09-328-352-7581

Query Match 15.1%; Score 364; DB 4; Length 471;  
 Best Local Similarity 27.1%; Pred. No. 3.6e-26;  
 Matches 115; Conservative 67; Mismatches 201; Indels 42; Gaps 14;  
 QY 23 DEELFQHELKTIIFARNWLFTHDSLPAGDVTYAKGIDIVYVSQNDGSTRAFINVC 82  
 Db 35 EPELFLEMEFIFEKWIYACHSEIIPNNHDFUTVQIGRQPIVSRDQKGLHAMYNACE 94  
 QY 83 HRGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVPEKDLGYESLNKKCLGLKEVARVE 142  
 Db 95 HRGATLTVRAKGNQSTFTCPHAWCYKSDGRUVKVPSE-YCEDPDKSSRLKQ-GRTA 152  
 QY 143 SFAGFIYGCDFQDA-PPLMDYLDGAAWYLEPMFKHS--GGLELVGPPGKVVIKANWKAPA 199  
 Db 153 SYRGFVFSVLDQTATDLSLDFGLDAXLFLDLMNQSPTEGLVQLQSSYTFAGNKLQN 212  
 QY 200 ENFVGDYHVGWTH---ASSLSRSGESIFSSLAGNAALPPEGAGLQWTSKYGSQGVLM 254  
 Db 213 ENGL-DGHRVSTVHYNVSTVQHQVQNAS-----KGAELOTLDSYKLGADGSDTD 262  
 QY 255 DGYSGVHSADLV-----PELMFAGGAKQBRLNKEIGDVRAIYRSHL-NCTVFPNNSM 306  
 Db 263 DGWFSFKNGHSLVFSMDPNFTVRPGSYTVPYVKEIKGYAEWAMHRLNRLNLYSUFF 322  
 QY 307 L-TCSGVFKVWNPIDANTTEVWTVAIVEKMDPEDLKRRLADSVQRTFGPAGFWESDDND 365  
 Db 323 MDQISSQLRIVRPVAMNKTEVISQCIGVKGESTEARNRIRQFEDFNVSGUGTDDDLVE 382  
 QY 366 METASQNGKXQSRDSDLLSNLGFGEVDYGDVYGVVGKSAIGETSYRGFYRAY 418  
 Db 383 FREQQKGFQARLERWSDI--SRGCSWEYCATKNSQDLGIQFVITGR-----EFTHGLYV 436

QY 419 AYOAH 423  
 Db 437 NOUGH 441

## RESULT 6

US-09-252-991A-25088  
 ; Sequence 25088, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; FILE REFERENCES: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; CURRENT APPLICATION NUMBER: 107196.136  
 ; PRIOR FILING DATE: 1999-02-18  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 25088  
 ; LENGTH: 425  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-25088

Query Match 14.3%; Score 345.5; DB 4; Length 425;  
 Best Local Similarity 27.4%; Pred. No. 1.8e-24;  
 Matches 114; Conservative 71; Mismatches 178; Indels 53; Gaps 15;  
 QY 25 ELFQHELKTIIFARNWLFTHDSLPAGDVTYAKGIDIVYVSQNDGSTRAFINVCXHR 84  
 Db 25 ELHRELEHIFDSDSWLYAAHLSELREPFGDFTTRDVGGERNLIITRRADGEPAYVNLNACAR 84  
 QY 85 GKTLSVVEAGNAKGFVCSYHGWGFGSNGELQSVPEKDLGYESLNKKCLGLKEVARVES- 143  
 Db 85 GAKVCAERQGNQSQRFTCPYHGWYDHSGLLGLP-DKAAVQHA--GQCHPELSUTRVKHA 141  
 QY 144 -FHGFIYGCDFQDA-PPLMDYLDGAAWYLEPMFKHS--GGLELVGPPGKVVIKANWKAPA 201  
 Db 142 VYRNFLFTHYAAQPSLETYLGQAKDYIDLCDQSEAELEIIPGCFEHSIKANKKLLAEN 201  
 QY 202 FVGDAYHVGWTHASLSRSGESIFSSLAGNAALPPEGAGLQWTSKYGSQGVLMGYSVH 261  
 Db 202 GV-DAYHLFPAHKKYLEVNTL-----GTDPESHKRGHGRG-EALGNHALII 246  
 QY 262 S-----ADLVPE-LMAFGGAKQBRLNKEIGDVRAIYRSHLNTCTVFPN--N 304  
 Db 247 GGPSTGRTPIAYWSPFLPEALKPSIAKFERLVRFQOARIEDIANTKSLFIFPLVIN 306  
 QY 305 SMLTCSGVFKVWNPIDANTTEVWTVAIVEKMDPEDLKRRLADSVQRTFGPAGFWESDDND 364  
 Db 307 DILGLN--IRSFPTADEVSVTVWAGFADREERAARINGLIISFPGCGFTPDDE 364  
 QY 365 NMETASQNGKXQSRDSDLLSNLGFGEVDYGDVYGVVGKSAIGETSYRGFYRAY 420  
 Db 365 ILESQ-----RAYAH-----AALGYSDFSRG-----MGPAFRRHYDEBQNRGFWREW 407

## RESULT 7

US-09-252-991A-17164  
 ; Sequence 17164, Application US/09252991A  
 ; Patent No. 6551795  
 ; GENERAL INFORMATION:  
 ; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; FILE REFERENCES: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; CURRENT APPLICATION NUMBER: 107196.136  
 ; PRIOR FILING DATE: 1999-02-18  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 17164  
 ; LENGTH: 425  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-17164

; PRIOR FILING DATE: 1998-02-18  
 ; PRIOR APPLICATION NUMBER: US 60/094,190  
 ; PRIOR FILING DATE: 1998-07-27  
 ; NUMBER OF SEQ ID NOS: 33142  
 ; SEQ ID NO 17164  
 ; LENGTH: 449  
 ; TYPE: PRT  
 ; ORGANISM: Pseudomonas aeruginosa  
 US-09-252-991A-17164

Query Match 12.1%; Score 292; DB 4; Length 449;  
 Best Local Similarity 26.4%; Pred. No. 2.4e-19;  
 Matches 111; Conservative 53; Mismatches 160; Indels 96; Gaps 17;  
 QY 23 DEELFOHELTIFARWNLPLTHDSLPAGDYVTAKMGIDIVTSRQDGSIRAFNLVCR 82  
 DB 60 DQRLFEIDMGEIIFKWLINGMTCEIPAKGNFUTLQKGNFVLIRGAGQVHAFHNVCR 119  
 QY 83 HRGKTLVSEAGNAKGFVCSYHGWGFGSNGELASVPEFKDLYGESLNKKCLGLKEVARVE 142  
 DB 120 HRGSLCVSEKGVAKLVCPYHQTVELDGLL---FAGTEGADPDMKEYGLKPI-QVK 175  
 QY 143 SFHGFYICDQAPFLMDYLGDAAWYLEPMFKHSGGLGLVGPVKVTK-----ANWK 196  
 DB 176 TAGGYIFISLAENPPAIDDFLATLEHMEPYDMEN-----AKVAVQTTIREAANK 226  
 QY 197 APAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGLQMTSKYSGMGVWDG 256  
 DB 227 LVLEN-NRECHNGSHPELKK-----TLEWDDVTDPRAS--QAFKQVAACTSAAND- 276  
 QY 257 YSGVHSADLVPELMA-FG-----GAKQ---ERLNKEIGDVRA 289  
 DB 277 -----AEKIPYAHASGFLNRIVRMLDGLTVSWTMDGKQSKKLMGRKIPDLGSNRI 330  
 QY 290 RYVSHLNCVFPNNSMLTCG-----VFKWNPIDANTTEWTVYALVEKMPF----- 338  
 DB 331 ----LHL-----PHSNHCHMGDHLVFTVW-PISAQETLVTTKMLVHKDAVEGVDYVA 379  
 QY 339 -----DLKRLADSVQRTFFGAPGFWSDDNDMETASONGKQYSDRSDLLSLNG 388  
 DB 380 RLREVWDATNDQDRLEAENQRGINSDAYQPGPYSTYFVGINFLDWYS--ERMLNNG 437

## RESULT 8

US-09-328-352-4700  
 ; Sequence 4700, Application US/09328352  
 ; Patent No. 6562958

## GENERAL INFORMATION:

; APPLICANT: Gary L. Breton et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO ACINETOBACTER  
 ; FILE REFERENCE: BAUMANNII FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: GTC99-03PA  
 ; CURRENT APPLICATION NUMBER: US/09/328,352  
 ; CURRENT FILING DATE: 1999-06-04  
 ; NUMBER OF SEQ ID NOS: 8252

SEQ ID NO 4700

LENGTH: 375

TYPE: PRT

ORGANISM: Acinetobacter baumannii

US-09-328-352-4700

Query Match 11.6%; Score 279.5; DB 4; Length 375;  
 Best Local Similarity 26.2%; Pred. No. 2.8e-18;  
 Matches 97; Conservative 57; Mismatches 131; Indels 85; Gaps 17;

QY 19 LTHGDELFQHELTIFARNWFLTHDSLPAGDYVTAKMGIDIVTSRQDGSIRAFNL 78  
 DB 28 VFTTSQVFEHEKEVIFAKSWICVAGHSLAQFNDDYITRKVIGENIIRGNDVSLRAFY 87  
 QY 79 NVCRHKGKTLVSEAGNAKGFV-CSYHGWGFGSNGELQSV-----PEKDLYESLNK 130  
 DB 88 NVCPHGHLLS-GSKAKNVITCTPHAWTFKDGSLALARNCDHVESFDKE-----NS 140

QY 131 KCLGLKEVARVESFHGFIYCGFQDQAPFLMDYLGDAAWYLEPMFKHSGGLGLVGPVKV 190  
 DB 141 SMVPLK-----VEYAGFVFINNDENATCVEDQL---PGFABRLNQACGVIKDLKLAARFV 193  
 QY 191 IK--ANNKAPAEFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGLQMTSKYGS 248  
 DB 194 TETPANWKVIVDNYM-ECYHCGPAH-----PGFADSVQVDKYYH 231  
 QY 249 GMGVLWDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCVTP---PNNS 305  
 DB 232 TTHQNTLQYG-----FARSSEKFKLDPSVTDPEFHGFWT-WPCTMFNVVPGSN 280  
 QY 306 MLTCSGVFKVNPIDANTTEWTVYALV-----EKDM-----PEDLKERLADS 347  
 DB 281 FWTVIYEP-----PVDATT-LQHYDIYFTNEELTQDOKOLIEWYRNVFRPDL--NLVES 333  
 QY 348 VQRTFGPAGF 357  
 DB 334 VQRLKSGY 343

## RESULT 9

US-09-252-991A-19627  
 ; Sequence 19627, Application US/09252991A  
 ; Patent No. 6551795

## GENERAL INFORMATION:

; APPLICANT: Marc J. Rubenfield et al.  
 ; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS  
 ; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS  
 ; FILE REFERENCE: 107196.136

CURRENT APPLICATION NUMBER: US/09/252,991A

CURRENT FILING DATE: 1999-02-18

PRIOR APPLICATION NUMBER: US 60/074,788

PRIOR FILING DATE: 1998-02-18

PRIOR APPLICATION NUMBER: US 60/094,190

PRIOR FILING DATE: 1998-07-27

NUMBER OF SEQ ID NOS: 33142

SEQ ID NO 19627

LENGTH: 529

TYPE: PRT

ORGANISM: Pseudomonas aeruginosa

US-09-252-991A-19627

Query Match 9.9%; Score 237.5; DB 4; Length 529;  
 Best Local Similarity 24.9%; Pred. No. 4.7e-14;  
 Matches 86; Conservative 54; Mismatches 139; Indels 67; Gaps 15;

QY 30 ELKTIIFARNWFLTHDSLPAGDYVTAKMGIDIVTSRQDGSIRAFNLVCRHKGKTLV 89  
 DB 173 ERERLFGRLMTFVGFSSWVRERNQFFTRKLAGVPVVVQRTESG-IRAFLNQCPIR-LSAI 230  
 QY 90 SVEAGNAKGFVCSYHGWGFGSNGELQSVPEKOLIGESLNKCC-LGLKEVARVESFHGFI 148  
 DB 231 QTECTGQRPVPCPYHAWSGFAGLQGP-NSSLYQFSABERARIGLRKL-HLEEVQQL 288  
 QY 149 YGCFDQAPFLMDYLGDAAWYLEPMFKHSGGLE--LVGPPGKVIKANWKAPENFVGDA 206  
 DB 289 FVNLAADPLPLREQFDG--FLETLRVSSHLDTRLYSCHKV--RYNKNMNMEN-VYDY 343  
 QY 207 YHGWTHASS-LRSGESIFSSLAGNAALP-----PEGAGLQMTSK-----YGS 248  
 DB 344 NHVPFVHPKTFPLPWTAPVRGLAREAAVPEVLRLAQEGETPELRSLSPPTKAPIQPKYS 403  
 QY 249 GMGVLWDGYSGVHSADLVPELMAFGGAKQERLNKEIGDVRIYRSHLNCVTPFNNSMLT 308  
 DB 404 WFDLCEGYGDEH-----AYNNFIYFNVNFC 431  
 QY 309 CSG---VFKVWNPIDANTTB--VMTYAIVEKMPEDLKRRLADSVQ 349  
 DB 432 VRGHEFLQQYDVPVAPGETDIHLMMWTARRKDKPTDFSAULLTLIR 477

## RESULT 10



```

; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 2811437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997
; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 20:
; Sequence 20, Application US/08/810,009
; Patent No. 6211437
; GENERAL INFORMATION:
; APPLICANT: Briggs, Steven P.
; APPLICANT: Johal, Gurmukh S.
; APPLICANT: Gray, John
; TITLE OF INVENTION: METHODS AND COMPOSITIONS FOR CONTROLLING
; TITLE OF INVENTION: CELL DEATH AND DISEASE RESISTANCE IN PLANTS
; NUMBER OF SEQUENCES: 65
; CORRESPONDENCE ADDRESS:
; ADDRESSEE: BELL, SELTZER, PARK & GIBSON
; STREET: P.O. Drawer 34009
; CITY: Charlotte
; STATE: No. 2811437th Carolina
; COUNTRY: USA
; ZIP: 28234
; COMPUTER READABLE FORM:
; MEDIUM TYPE: Floppy disk
; COMPUTER: IBM PC compatible
; OPERATING SYSTEM: PC-DOS/MS-DOS
; SOFTWARE: Patentin Release #1.0, Version #1.30
; CURRENT APPLICATION DATA:
; APPLICATION NUMBER: US/08/810,009
; FILING DATE: 04-MAR-1997

```

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; CLASSIFICATION: 800
; ATTORNEY/AGENT INFORMATION:
; NAME: Spruill, W. Murray
; REGISTRATION NUMBER: 32,943
; REFERENCE/DOCKET NUMBER: 5718-4
; TELECOMMUNICATION INFORMATION:
; TELEPHONE: 919-881-3140
; TELEFAX: 919-881-3175
; TELEX: 575102
; INFORMATION FOR SEQ ID NO: 21:
; Sequence 21, Application US/09/252,991A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/094,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 27100
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
; US-09-252-991A-27100

Query Match 7.0%; Score 168; DB 3; Length 35;
Best Local Similarity 80.0%; Pred. No. 3.2e-09;
Matches 28; Conservative 3; Mismatches 4; Indels 0; Gaps 0;

QY 79 NVCHRGKTLVSVEAGNAKGFVCSYHGWFSGNGE 113
DB 1 NVCHRGKTLVDABAGNAKGFVCGYHGWFSGNGK 35

RESULT 15
US-09-252-991A-27100
; Sequence 27100, Application US/09252991A
; Patent No. 6551795
; GENERAL INFORMATION:
; APPLICANT: Marc J. Rubenfield et al.
; TITLE OF INVENTION: NUCLEIC ACID AND AMINO ACID SEQUENCES RELATING TO PSEUDOMONAS
; TITLE OF INVENTION: AERUGINOSA FOR DIAGNOSTICS AND THERAPEUTICS
; FILE REFERENCE: 107196.136
; CURRENT APPLICATION NUMBER: US/09/252,991A
; CURRENT FILING DATE: 1999-02-18
; PRIOR APPLICATION NUMBER: US 60/074,788
; PRIOR FILING DATE: 1998-02-18
; PRIOR APPLICATION NUMBER: US 60/094,190
; PRIOR FILING DATE: 1998-07-27
; NUMBER OF SEQ ID NOS: 33142
; SEQ ID NO 27100
; LENGTH: 629
; TYPE: PRT
; ORGANISM: Pseudomonas aeruginosa
; US-09-252-991A-27100

Query Match 6.0%; Score 143.5; DB 4; Length 629;
Best Local Similarity 24.3%; Pred. No. 5.5e-05;
Matches 65; Conservative 41; Mismatches 103; Indels 59; Gaps 13;

QY 4 NNKILVSEGLSQKHLI--HGDELPQHELTIFARN--WLFTHDSLIPAFGDYVTAOM 59
DB 247 SNRFFVQKELTWKSCLANHWIQLQKQREDPTMPKNAWVACTPDELAKD---LGRRI 303
QY 60 GIDDEVISQRQDGSIRAFNLVCHRGK--TLVSVEAGNAKGFVCSYHGWFSGNGELQSV 117
DB 304 CDEPMVFYRGEDGRVALEDPCPHRGAPISLGEVDG---VLVCGYHGLAMGEDGRTRAM 360
QY 118 PFENDLYGESLNKKCLGLKEVAR--VESFHGYT---GCFQEAPEPLMDYLDGAAWYLEP 172
DB 361 P-----GQVRGFFCIRFPFQERHGFVWVWFGAEQADAALIPRL---EWAESP 407
QY 173 MFKHSGGLVGPFGKVVIXANWKAPEAVGDVANGVTHASSL-----R 218
DB 408 DWAYCGGL-----YHICDYLRLMDNLM-DLTHETVTHASSIGQKIDEAPTTRVS 458
QY 219 SGEISFSSLAGNAALPE-----EGAGL 240
DB 459 GDEVITSRHQNVNAPFFWFMALRGNGL 486

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us-09-843-250-26.ra1

Wed Dec 10 08:12:33 2003

Search completed: December 9, 2003, 15:45:52  
Job time : 12 secs

GenCore version 5.1.6  
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OM protein - protein search, using sw model

Run on: December 9, 2003, 15:44:14 ; Search time 22.1429 Seconds  
(without alignments)  
3771.269 Million cell updates/sec

Title: US-09-843-250-2

Perfect score: 2408

Sequence: 1 MYNNKILVSEGLSOKHLI.....APEFHASSTWHTLTKTTDR 449

Scoring table: BLOSUM62

Gapop 10.0 , Gapext 0.5

Searched: 684280 seqs, 185983659 residues

Total number of hits satisfying chosen parameters: 684280

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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5: /cgm2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep.*
6: /cgm2_6/ptodata/1/pubpaa/PCTUS_PUBCOMB.pep.*
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11: /cgm2_6/ptodata/1/pubpaa/US09C_PUBCOMB.pep.*
12: /cgm2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep.*
13: /cgm2_6/ptodata/1/pubpaa/US10A_PUBCOMB.pep.*
14: /cgm2_6/ptodata/1/pubpaa/US10B_PUBCOMB.pep.*
15: /cgm2_6/ptodata/1/pubpaa/US10C_PUBCOMB.pep.*
16: /cgm2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep.*
17: /cgm2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep.*
18: /cgm2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep.*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	2408	100.0	449	11	US-09-843-250-2
2	2408	100.0	449	11	US-09-843-250-14
3	2408	100.0	449	11	US-09-843-250-15
4	2407	100.0	449	11	US-09-843-250-36
5	2405	99.9	449	11	US-09-843-250-35
6	2404	99.8	449	11	US-09-843-250-33
7	2404	99.8	449	11	US-09-843-250-34
8	2403	99.8	449	11	US-09-843-250-16
9	2403	99.8	449	11	US-09-843-250-26
10	2403	99.8	449	11	US-09-843-250-59
11	2401	99.7	449	11	US-09-843-250-32
12	2401	99.7	449	11	US-09-843-250-58
13	2398	99.6	449	11	US-09-843-250-17
14	2350	97.6	449	11	US-09-843-250-18
15	2322	96.4	449	11	US-09-843-250-19

16	2296	95.3	449	11	US-09-843-250-20	Sequence 20, Appl
17	2223	92.3	449	11	US-09-843-250-21	Sequence 21, Appl
18	2193	91.1	447	11	US-09-843-250-22	Sequence 22, Appl
19	2056	85.4	447	11	US-09-843-250-23	Sequence 23, Appl
20	1972.5	81.9	451	11	US-09-843-250-24	Sequence 24, Appl
21	736	30.6	453	9	US-09-815-242-10253	Sequence 10253, A
22	376	15.6	490	10	US-09-738-626-6140	Sequence 6140, Ap
23	375.5	15.6	385	9	US-09-815-242-11692	Sequence 11692, A
24	340.5	14.1	424	9	US-09-815-242-5097	Sequence 5097, Ap
25	245.5	10.2	382	15	US-10-156-761-14477	Sequence 14477, A
26	185	7.7	35	9	US-09-776-490-19	Sequence 19, Appl
27	185	7.7	35	9	US-09-776-491-19	Sequence 19, Appl
28	174	7.2	35	9	US-09-776-490-20	Sequence 20, Appl
29	174	7.2	35	9	US-09-776-491-20	Sequence 20, Appl
30	168	7.0	35	9	US-09-776-490-21	Sequence 21, Appl
31	168	7.0	35	9	US-09-776-491-21	Sequence 21, Appl
32	118.5	4.9	354	8	US-08-976-063C-4	Sequence 4, Appl
33	110	4.6	35	9	US-09-776-490-12	Sequence 12, Appl
34	110	4.6	35	9	US-09-776-491-12	Sequence 12, Appl
35	109	4.5	35	9	US-09-776-490-14	Sequence 14, Appl
36	109	4.5	35	9	US-09-776-491-14	Sequence 14, Appl
37	109	4.5	622	15	US-10-124-880-4	Sequence 4, Appl
38	108	4.5	35	9	US-09-776-490-13	Sequence 13, Appl
39	108	4.5	35	9	US-09-776-490-15	Sequence 15, Appl
40	108	4.5	35	9	US-09-776-491-13	Sequence 13, Appl
41	108	4.5	35	9	US-09-776-491-15	Sequence 15, Appl
42	107.5	4.5	548	14	US-10-047-542-78	Sequence 78, Appl
43	106.5	4.4	951	10	US-09-924-097-15	Sequence 15, Appl
44	106	4.4	35	9	US-09-776-490-9	Sequence 9, Appl
45	106	4.4	35	9	US-09-776-491-9	Sequence 9, Appl

## ALIGNMENTS

## RESULT 1

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US-09-843-250-2
; Sequence 2, Application US/09843250
; Publication No. US20030022335A1
; GENERAL INFORMATION:
; APPLICANT: Parales, R.
; APPLICANT: Gibson, D.
; APPLICANT: Resnick, S.
; APPLICANT: Lee, K.
; TITLE OF INVENTION: NO. US20030022335A1el naphthalene dioxygenase and methods for the
; FILE REFERENCE: 875, 006US2
; CURRENT APPLICATION NUMBER: US/09/843,250
; CURRENT FILING DATE: 2001-04-26
; PRIOR APPLICATION NUMBER: PCT/US99/25079
; PRIOR FILING DATE: 1999-10-26
; PRIOR APPLICATION NUMBER: US 60/105,575
; PRIOR FILING DATE: 1998-10-26
; NUMBER OF SEQ ID NOS: 65
; SOFTWARE: FastSeq for Windows Version 4.0
; SEQ ID NO 2
; LENGTH: 449
; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:1
US-09-843-250-2

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Query Match 100.0%; Score 2408; DB 11; Length 449;  
Best Local Similarity 100.0%; Pred. No. 2.6e-226;  
Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy	1	MYNNKILVSEGLSOKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAGGYVTKMG	60
Db	1	MYNNKILVSEGLSOKHLIHGDEELFQHELKTIIFARNWLFTHDSLIPAGGYVTKMG	60
Qy	61	IDEVIVSRQNDGSTRAPLVNCRHGKTLVSVENAGNAKGFVCSYHGMFGSNGELQSVPE	120
Db	61	IDEVIVSRQNDGSTRAPLVNCRHGKTLVSVENAGNAKGFVCSYHGMFGSNGELQSVPE	120

QY 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
DB 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSKAIGETSIRGFYRAY 420  
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSKAIGETSIRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTTWHTELTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTTWHTELTKTTDR 449

## RESULT 2

US-09-843-250-14  
; Sequence 14, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 14  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:3.  
US-09-843-250-14

Query Match 100.0%; Score 2408; DB 11; Length 449;  
Best Local Similarity 100.0%; Pred. No. 2.6e-226;  
Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPE 120  
DB 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPE 120  
QY 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
DB 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSKAIGETSIRGFYRAY 420  
DB 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSKAIGETSIRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASTTWHTELTKTTDR 449  
DB 421 QAHVSSSNWAEFEHASTTWHTELTKTTDR 449

## RESULT 3

US-09-843-250-15  
; Sequence 15, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 15  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:4.  
US-09-843-250-15

Query Match 100.0%; Score 2408; DB 11; Length 449;  
Best Local Similarity 100.0%; Pred. No. 2.6e-226;  
Matches 449; Conservative 0; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
DB 1 MNYNNKILVSESGLSQKHLIHGDEELFOHELKTIIFARNWLFTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPE 120  
DB 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSNGELQSVFPE 120  
QY 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
DB 121 KOLYGESLNKCKLKEVARVESPHGFIYGCFOEAPPLMDYLGDAAWYLEPMPKHSGL 180  
QY 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPFGKVIKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPPGAGL 240  
QY 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
DB 241 QMTSKYSGMGVLWDGYSVHSDADLVPFLMAFGAKOERLNKEIGDVRARIYRSHLNTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEDEVYGDVYGVVGSKAIGETSIRGFYRAY 420

Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVAVGVGKSAIGTYSYRGFRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

RESULT 4

US-09-843-250-36  
; Sequence 36, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 36  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:31.  
US-09-843-250-36

Query Match 100.0%; Score 2407; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 3.2e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCCIGLKEVARVESFHGTYGCFDQEPAPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLYGESLNKCCIGLKEVARVESFHGTYGCFDQEPAPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPPGKVIKANKWAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPPGKVIKANKWAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYGGSGVLMWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYGGSGVLMWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVAVGVGKSAIGTYSYRGFRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVAVGVGKSAIGTYSYRGFRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

RESULT 5

US-09-843-250-35  
; Sequence 35, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 35  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:30.  
US-09-843-250-35

Query Match 99.9%; Score 2405; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 5.1e-226;  
Matches 448; Conservative 1; Mismatches 0; Indels 0; Gaps 0;  
QY 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
Db 1 MNYNNKILVSESGLSQKHLIHGDELFQHELKTIIFARNWLFTHDSLIPAPGDYVTAKWG 60  
QY 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFNLNVCRRHGTILVSVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLYGESLNKCCIGLKEVARVESFHGTYGCFDQEPAPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLYGESLNKCCIGLKEVARVESFHGTYGCFDQEPAPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPPGKVIKANKWAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPPGKVIKANKWAPAEFVGDYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYGGSGVLMWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYGGSGVLMWDGYSGVHSADLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTIGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIIVEKMPEDLKRRLADSVQRTIGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVAVGVGKSAIGTYSYRGFRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGVAVGVGKSAIGTYSYRGFRAY 420  
QY 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASTWHTLTKTTDR 449

RESULT 6

US-09-843-250-33  
; Sequence 33, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the



FILE REFERENCE: 875.006US2  
CURRENT APPLICATION NUMBER: US/09/843,250  
PRIOR FILING DATE: 2001-04-26  
PRIOR APPLICATION NUMBER: PCT/US99/25079  
PRIOR FILING DATE: 1999-10-26  
PRIOR APPLICATION NUMBER: US 60/105,575  
PRIOR FILING DATE: 1998-10-26  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 33  
LENGTH: 449  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:28.  
US-09-843-250-33

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 6.4e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNKKILVSEGLSQKHLIHGDEELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNKKILVSEGLSQKHLIHGDEELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120  
QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPCKVVIKANWKAPAEFVGDAHYHGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPCKVVIKANWKAPAEFVGDAHYHGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSYGVHSADLVPFELMAFGGAKQERLNKEIGDVRARIYRSHLACTV 300  
Db 241 QMTSKYSGMGVLDGYSYGVHSADLVPFELMAFGGAKQERLNKEIGDVRARIYRSHLACTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSLNGLFGEDVYGDVYGVVGSAGTETSIRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSLNGLFGEDVYGDVYGVVGSAGTETSIRGFYRAY 420  
QY 421 QAHVSSNNWAEFEHASSTWHTLTKTDDR 449  
Db 421 QAHVSSNNWAEFEHASSTWHTLTKTDDR 449

RESULT 7  
US-09-843-250-34  
Sequence 34, Application US/09843250  
Publication No. US20030022335A1  
GENERAL INFORMATION:  
APPLICANT: Parales, R.  
APPLICANT: Gibson, D.  
APPLICANT: Resnick, S.  
APPLICANT: Lee, K.  
TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
FILE REFERENCE: 875.006US2  
CURRENT APPLICATION NUMBER: US/09/843,250  
PRIOR FILING DATE: 2001-04-26  
PRIOR APPLICATION NUMBER: PCT/US99/25079  
PRIOR FILING DATE: 1999-10-26  
PRIOR APPLICATION NUMBER: US 60/105,575  
PRIOR FILING DATE: 1998-10-26  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: FastSeq for Windows Version 4.0

SEQ ID NO 34  
LENGTH: 449  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:29.  
US-09-843-250-34

Query Match 99.8%; Score 2404; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 6.4e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MNYNKKILVSEGLSQKHLIHGDEELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAKMG 60  
Db 1 MNYNKKILVSEGLSQKHLIHGDEELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAKMG 60  
QY 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120  
Db 61 IDEVIVSRQNDGSIIRAFINVCRRHGKTLVSVEAGNAKGFVCSYHGWGFGSGNGELQSVPE 120  
QY 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDIYGESLNKCKLGLKEVARVESFHGFIYGCDFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
QY 181 ELVGPCKVVIKANWKAPAEFVGDAHYHGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPCKVVIKANWKAPAEFVGDAHYHGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLDGYSYGVHSADLVPFELMAFGGAKQERLNKEIGDVRARIYRSHLACTV 300  
Db 241 QMTSKYSGMGVLDGYSYGVHSADLVPFELMAFGGAKQERLNKEIGDVRARIYRSHLACTV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIYEKOMPEDLKRRLADSVQRTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSLNGLFGEDVYGDVYGVVGSAGTETSIRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSLNGLFGEDVYGDVYGVVGSAGTETSIRGFYRAY 420  
QY 421 QAHVSSNNWAEFEHASSTWHTLTKTDDR 449  
Db 421 QAHVSSNNWAEFEHASSTWHTLTKTDDR 449

RESULT 8  
US-09-843-250-16  
Sequence 16, Application US/09843250  
Publication No. US20030022335A1  
GENERAL INFORMATION:  
APPLICANT: Parales, R.  
APPLICANT: Gibson, D.  
APPLICANT: Resnick, S.  
APPLICANT: Lee, K.  
TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
FILE REFERENCE: 875.006US2  
CURRENT APPLICATION NUMBER: US/09/843,250  
CURRENT FILING DATE: 2001-04-26  
PRIOR APPLICATION NUMBER: PCT/US99/25079  
PRIOR FILING DATE: 1999-10-26  
PRIOR APPLICATION NUMBER: US 60/105,575  
PRIOR FILING DATE: 1998-10-26  
NUMBER OF SEQ ID NOS: 65  
SOFTWARE: FastSeq for Windows Version 4.0  
SEQ ID NO 16  
LENGTH: 449  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:5.  
US-09-843-250-16

Query Match 99.8%; Score 2403; DB 11; Length 449;

Best Local Similarity 99.8%; Pred. No. 8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60  
DB 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120  
DB 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120

QY 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180

QY 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSYHSDLVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSYHSDLVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRRLADSVQRTVGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRRLADSVQRTVGPAGFWES 360

QY 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFEDVYGDVAVGVVGSAGTSTYRGFYRAY 420  
DB 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFEDVYGDVAVGVVGSAGTSTYRGFYRAY 420

QY 421 QARVSSSNWAEFEHASSHTWHTLTCTTDR 449  
DB 421 QARVSSSNWAEFEHASSHTWHTLTCTTDR 449

## RESULT 9

US-09-843-250-26  
; Sequence 26, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 26  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Pseudomonas sp.  
US-09-843-250-26

Query Match  
Best Local Similarity 99.8%; Pred. No. 8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60  
DB 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120  
DB 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120

QY 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180

QY 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSYHSDLVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300  
DB 241 QMTSKYSGMGVLDGYSYHSDLVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300

QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRRLADSVQRTVGPAGFWES 360  
DB 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAIVEKMDPEDLKRRLADSVQRTVGPAGFWES 360

QY 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFEDVYGDVAVGVVGSAGTSTYRGFYRAY 420  
DB 361 DDNDNMTASQNGKKYQSRDSDLLSNLGFEDVYGDVAVGVVGSAGTSTYRGFYRAY 420

QY 421 QARVSSSNWAEFEHASSHTWHTLTCTTDR 449  
DB 421 QARVSSSNWAEFEHASSHTWHTLTCTTDR 449

## RESULT 10

US-09-843-250-59  
; Sequence 59, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 59  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURES:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:57.  
US-09-843-250-59

Query Match  
Best Local Similarity 99.8%; Pred. No. 8e-226;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

QY 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60  
DB 1 MYNNKILVSSGLSQKHLHGDEBELFQHELKTIIFARNWFLTHDSLIIPAGDYVTAKMG 60

QY 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120  
DB 61 IDEVIVSRQNDGSTRAFINVCRRHGTILSVVEAGNAGFVCSYHGMGFGSNGELQSVFPE 120

QY 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
DB 121 KOLYGESLNKKCLGKEVARVESFHGFIYGCFOEAPPLMDYLGDAAWYLEPMPFKHSGGL 180

QY 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240  
DB 181 ELVGPGRKVVIIKANWKAPAENFVGDYHVGWTHASSLRSGESIFSSLAGNAALPPPGAGL 240

QY 241 QMTSKYSGMGVLDGYSYHSDLVPELMAFGAKOERLNKEIGDVRARIYRSHLNCV 300

Db 241 QMTSKYSGMGLVNDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449

RESULT 11  
US-09-843-250-32  
; Sequence 32, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 32  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:27.  
US-09-843-250-32

Query Match 99.7%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.2e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MMYNKKILVSSSGLSQKHLIHGDELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAQMG 60  
Db 1 MMYNKKILVSSSGLSQKHLIHGDELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAQMG 60  
QY 61 IDEVTVSRQNDGSIKRAFLNVCRRHGTILSVVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVTVSRQNDGSIKRAFLNVCRRHGTILSVVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLVGSLSNKKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
Db 121 KDLVGSLSNKKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVIKANWKAPEAFNFGDHYVGTWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNFGDHYVGTWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLVNDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGLVNDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420

Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449  
RESULT 12  
US-09-843-250-58  
; Sequence 58, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1 naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 58  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:56.  
US-09-843-250-58

Query Match 99.7%; Score 2401; DB 11; Length 449;  
Best Local Similarity 99.8%; Pred. No. 1.2e-225;  
Matches 448; Conservative 0; Mismatches 1; Indels 0; Gaps 0;  
QY 1 MMYNKKILVSSSGLSQKHLIHGDELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAQMG 60  
Db 1 MMYNKKILVSSSGLSQKHLIHGDELFQHELKTIIPARNWFLTHDSLIPAPGDYVTAQMG 60  
QY 61 IDEVTVSRQNDGSIKRAFLNVCRRHGTILSVVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVTVSRQNDGSIKRAFLNVCRRHGTILSVVAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
QY 121 KDLVGSLSNKKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
Db 121 KDLVGSLSNKKLGLKEVARVESFHGFIYGCDFQDAPPLMDYLGDAAWYLEPMPFKHSGGL 180  
QY 181 ELVGPFGKVIKANWKAPEAFNFGDHYVGTWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
Db 181 ELVGPFGKVIKANWKAPEAFNFGDHYVGTWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGLVNDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGLVNDGYSVHSDLVPELMAFGAKQERLNKEIGDVRARIYRSHLNCV 300  
QY 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
Db 301 FPNNSMLTCSGVFKVWNPIDANTTEVWTYAI VEKOMPEDLKRRLADSVQRTVGPAGFWS 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
Db 361 DDNDNMETASQNGKKYQSRDSDLLSNLGFGEVDYGDVAVPGVVKSAIGETSYRGFYRAY 420  
QY 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449  
Db 421 QAHVSSSNWAEFEHASSSTWHTLTKTTDR 449

RESULT 13  
US-09-843-250-17

; Sequence 17, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; PRIOR FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 17  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:6.  
US-09-843-250-17

Query Match 99.6%; Score 2398; DB 11; Length 449;  
Best Local Similarity 99.6%; Pred. No. 2.5e-225;  
Matches 447; Conservative 1; Mismatches 1; Indels 0; Gaps 0;  
  
QY 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60  
Db 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60  
  
QY 61 IDEVIVSRQDGSIRAFNLNCRHGRKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFNLNCRHGRKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
  
QY 121 KDLGESLNKKCLGLKEVARVESFHGFIYCGFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLGESLNKKCLGLKEVARVESFHGFIYCGFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
  
QY 181 ELVGPCKGVKIKANKKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPCKGVKIKANKKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240  
  
QY 241 QMTSKYSGMGVLDGYSVHSADLPVLMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDGYSVHSADLPVLMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
  
QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRRLADSVQRTVGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRRLADSVQRTVGPAGFWES 360  
  
QY 361 DDNDNMTASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGVKSAIGTSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGVKSAIGTSYRGFYRAY 420  
  
QY 421 QARVSSNNWAEFEHASSTWHTLTCTTDR 449  
Db 421 QARVSSNNWAEFEHASSTWHTLTCTTDR 449

RESULT 14  
US-09-843-250-18  
; Sequence 18, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2

; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 18  
; LENGTH: 449  
; TYPE: PRT  
; ORGANISM: Artificial Sequence  
; FEATURE:  
; OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:7.  
US-09-843-250-18

Query Match 97.6%; Score 2350; DB 11; Length 449;  
Best Local Similarity 96.9%; Pred. No. 1.2e-220;  
Matches 435; Conservative 10; Mismatches 4; Indels 0; Gaps 0;  
  
QY 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60  
Db 1 MNYNKKILVSESGLSQKHLIHGDEELFQHELKTIIFARNWMLFLTHDSLIPAGDYVTAKWG 60  
  
QY 61 IDEVIVSRQDGSIRAFNLNCRHGRKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
Db 61 IDEVIVSRQDGSIRAFNLNCRHGRKTLVSVBAGNAKGFVCSYHGWGFGSNGELQSVPE 120  
  
QY 121 KDLGESLNKKCLGLKEVARVESFHGFIYCGFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
Db 121 KDLGESLNKKCLGLKEVARVESFHGFIYCGFQDQAPPLMDYLGDAAWYLEPMFKHSGGL 180  
  
QY 181 ELVGPCKGVKIKANKKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240  
Db 181 ELVGPCKGVKIKANKKAPAEFVGDYHVGWTHASSIRSGESIFSSLAGNAALPPGAGL 240  
  
QY 241 QMTSKYSGMGVLDGYSVHSADLPVLMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
Db 241 QMTSKYSGMGVLDGYSVHSADLPVLMFAGKQERLNKEIGDVRARIYRSHLNCV 300  
  
QY 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRRLADSVQRTVGPAGFWES 360  
Db 301 FPNNSMLTCSGVFKVKNPIDANTTEVWTYAIVEKDMPEDLKRRLADSVQRTVGPAGFWES 360  
  
QY 361 DDNDNMTASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGVKSAIGTSYRGFYRAY 420  
Db 361 DDNDNMTASQNGKKYQSRDLSNLGFGEDVYGDVYGVVGVKSAIGTSYRGFYRAY 420  
  
QY 421 QARVSSNNWAEFEHASSTWHTLTCTTDR 449  
Db 421 QARVSSNNWAEFEHASSTWHTLTCTTDR 449

RESULT 15  
US-09-843-250-19  
; Sequence 19, Application US/09843250  
; Publication No. US20030022335A1  
; GENERAL INFORMATION:  
; APPLICANT: Parales, R.  
; APPLICANT: Gibson, D.  
; APPLICANT: Resnick, S.  
; APPLICANT: Lee, K.  
; TITLE OF INVENTION: No. US20030022335A1el naphthalene dioxygenase and methods for the  
; FILE REFERENCE: 875.006US2  
; CURRENT APPLICATION NUMBER: US/09/843,250  
; CURRENT FILING DATE: 2001-04-26  
; PRIOR APPLICATION NUMBER: PCT/US99/25079  
; PRIOR FILING DATE: 1999-10-26  
; PRIOR APPLICATION NUMBER: US 60/105,575  
; PRIOR FILING DATE: 1998-10-26  
; NUMBER OF SEQ ID NOS: 65  
; SOFTWARE: FastSeq for Windows Version 4.0  
; SEQ ID NO 19

LENGTH: 449  
TYPE: PRT  
ORGANISM: Artificial Sequence  
FEATURE:  
OTHER INFORMATION: A polypeptide encoded by SEQ ID NO:8.  
NAME/KEY: SITE  
LOCATION: (35)...(35)  
OTHER INFORMATION: Xaa = any amino acid.  
US-09-843-250-19

Query Match 96.4%; Score 2322; DB 11; Length 449;  
Best Local Similarity 95.8%; Pred. No 6.5e-218;  
Matches 430; Conservative 12; Mismatches 7; Indels 0; Gaps 0;

QY 1 MNTNKLIVSEGLSQKLIHGDEELFQHELKTIIPARNWLFTHDSLIPADGDIYVYAKMG 60  
DB 1 MNTNKLIVSEGLTQKLIHGDEELFQHELKTIIPARNWLFTHDSLIPADGDIYVYAKMG 60  
QY 61 IDEVIVSRQDGSIRAFINVCRRHGTLYSVRAGNAKGFVCSYHGMGFGSGNGELQSVPEE 120  
DB 61 IDEVIVSRQDGSIRAFINVCRRHGTLYSVRAGNAKGFVCSYHGMGFGSGNGELQSVPEE 120  
QY 121 KDLYGESLNKKCLGLKEVARVESFHGFIYGCDFQEAAPPLMDYLGDAAWYLPFPMFKHSCGL 180  
DB 121 KELYGESLNKKCLGLKEVARVESFHGFIYGCDFQEAAPSLMDYLGDAAWYLPFPMFKHSCGL 180  
QY 181 ELVGPCKVITKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
DB 181 ELVGPCKVITKANWKAPAENFVGDAYHVGWTHASSLSRSGESIFSSLAGNAALPPEGAGL 240  
QY 241 QMTSKYSGMGVLWDGYSGVHSDLVPELMAFGCAKQERLNKEIGDVPARIYRSHLNCTV 300  
DB 241 QMTSKYSGMGVLWDGYSGVHSDLVPELMAFGCAKQERLNKEIGDVPARIYRSHLNCTV 300  
QY 301 PPNSMLTCSGVFKVWNPIDANTTEVWTVAIVKMDPEDLKRDLADSVORTVGPAGFWES 360  
DB 301 PPNSMLTCSGVFKVWNPIDANTTEVWTVAIVKMDPEDLKRDLADSVORTVGPAGFWES 360  
QY 361 DDNDNMETASQNGKKYQSRDSDLSNLGFGEDVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
DB 361 DDNDNMETASQNGKKYQSRDSDLSNLGFGEDVYGDVYGVVGVKSAIGETSYRGFYRAY 420  
QY 421 QARVSSSNWAEFEHASTHTLTKTTDR 449  
DB 421 QARVSSSNWAEFEHASTHTLTKTTDR 449

Search completed: December 9, 2003, 16:09:30  
Job time : 23.1429 secs